Objectives

1 To define evaluation and to describe each of the four stages in the evaluation process.

2 To select appropriate information-gathering instruments when seeking to make classroom evaluations.

3 To write good test items for evaluating achievement.

4 To develop checklists and rating scales for evaluating student products and performances.

5 To describe how to use information to evaluate—that is, to grade, to judge student progress, to judge changes in student attitudes, and to judge the effectiveness of your own instruction.

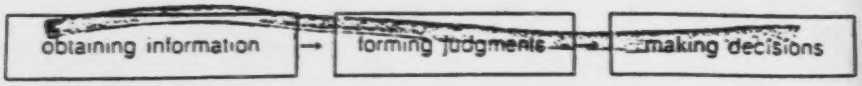
Educational evaluation is useful only to the extent that it helps the educator (administrator, teacher, student) make sound educational judgments and decisions. In this chapter you will learn about some of the basic principles of evaluation as applied to classroom problems. This chapter can be very helpful when you are faced with the task of evaluating your students. However, I would encourage you to go beyond this introductory level of understanding. Purchase a good basic text on classroom evaluation techniques. Practice your test-writing skills whenever possible. Learn from your mistakes as you begin to evaluate your own students, and learn to use evaluation as a necessary and important teacher tool. Use evaluation to help you teach better and to help your students learn better.

Objective 1

To define evaluation and to describe each of the four stages in the evaluation process.

LEARNING ACTIVITY 1.1

Stated most simply, to evaluate is to place a value upon — to judge. However, forming a judgment is not an independent action. In order to judge, one must have information. The act of judging depends upon this prerequisite act of obtaining information. Furthermore, the act of forming a judgment is itself prerequisite to an action one step further: decision making. So, evaluation, the process of forming judgments, depends upon information gathering and leads to decision making. Picture it this way:



Or, this way:

Evaluation is the process of obtaining information and using it to form judgments which, in turn, are used in decision making.

The above definition clearly specifies the interrelatedness amon the various stages in the evaluation process; and yet, it also clearl indicates the centrality of forming judgments. If you have not formed judgment, you have not evaluated. This chapter, therefore, will dea primarily with the procedures for forming judgments.

However, it is important for you to understand the *total* evaluatio process. So, let's expand this definition some. So far it is obvious th evaluation involves at least three stages: obtaining information, form ing judgments, and using those judgments in decision making. B adding a preparation stage and enlarging a bit on the last stage, w come up with the following four stages:

The evaluation process

Stage 1: Preparing for evaluation.
Stage 2: Obtaining needed information.
Stage 3: Forming judgments.
Stage 4: Using judgments in making decisions and preparing evaluation reports.

Let's look at a rather typical teaching–learning situation. Noti how this teacher goes through these four stages as she attempts make her instruction more effective.

Stage 1. Preparing for evaluation.

Bonnie, a third grade teacher, has become concerned about Billy. seems to be having trouble keeping up in reading. Bonnie wonders h long he will be able to function within the reading group he is in. S wonders whether or not she should move him to a slower group. Perha there is something she can do to help — some extra work, for example, some extra attention. She decides she needs more information before s can accurately judge Billy's level of achievement in reading. After det mining the kind of information she needs (e.g., information about the ki of errors made when reading orally, information concerning Billy's use various word attack skills, information about Billy's interests), Bon determines when and how to obtain that information.

Stage 2. Obtaining needed information.

Over a period of several days Bonnie obtains a great deal of infor tion about Billy. She gives him a standardized reading test, listens to h read orally, carefully records the kind of errors he makes, and obser him throughout the day watching for patterns of behavior that mi indicate particular attitudes toward various subject matters.

Stage 3. Forming judgments.

After analyzing all the information she has obtained, Bonnie comes to the following conclusions:

1. Billy is not capable of reading material written at a third grade level.
2. Billy reads comfortably only that material written on a second grade level or lower.
3. Billy's primary weakness lies in the area of word attack skills.
4. Billy does not have a comprehension problem. He understands what is read to him.
5. Billy likes the children in his reading group.
6. Billy enjoys the stories in the third grade reader.

Stage 4. Using judgments to make decisions and evaluation reports.

On the basis of the above judgments Bonnie decides that she should keep Billy in his present reading group. She further decides to take the following action:

1. Prepare a check list of word attack skills.
2. Systematically teach Billy those skills on a one-to-one basis.
3. Continue to have the stories read to Billy so that he will not fall behind on his comprehension skills.
4. Have Billy check off each word attack skill as he demonstrates competence in using it.

Having made these decisions, Bonnie writes a brief summary of her judgments, noting the actions she anticipates making. She files this in her own files for future reference. She also calls in Billy's parents and shares her findings with them, asking them to cooperate and to give Billy lots of encouragement and praise, supporting him as he struggles to make up the deficiencies she has discovered.

Note the key features of each of the stages illustrated above:

1. ~~*Stage 1: Preparation:*~~ Determine the kind of information needed and decide how and when to obtain it.
2. ~~*Stage 2: Information Gathering:*~~ Obtain a variety of information as accurately as possible.
3. ~~*Stage 3. Forming Judgments:*~~ Judgments are made by comparing the information to selected criteria.
4. ~~*Stage 4. Decision Making*~~ *and Reporting:* Record significant findings and determine appropriate courses of action.

ANSWER KEY

Mastery Test, Objective 1

1. Evaluation is the process of obtaining information and forming judgments to be used in decision making.
2. (a) *Preparing for evaluation.* In this stage you need to determine the judgments and decisions you anticipate making (e.g., when to begin Unit 2, what assignments to give, where to place Johnny). Next you must decide what information you will need in order to make those judgments and decisions (e.g., how quickly the students are moving through Unit 1, what the students' interests are, how well Johnny reads). Finally, you will decide when and how to obtain the information needed (e.g., weekly, through quizzes; first week of class, using an interest inventory; second week of class, using a standardized test of reading and observing students during oral reading).
   (b) *Obtaining needed information.* Involves asking students (inquiry), observing students (watching students setting up an experiment), or testing students (giving a multiple-choice test of history facts).
   (c) *Forming judgments.* In this stage you compare the information with some referent and make a value judgment. Grades reflecting achievement and predictions about how well a student might be expected to do are both common examples of classroom judgments.
   (d) *Using judgments in decisions and preparing evaluation reports.* Deciding what action to take (e.g., move Johnny to a slower reading group) and reporting the evaluation results that led to that decision comprise the major tasks of the final stage of evaluation. Note that the emphasis is on the *use* of judgments.

Objective 2

To select appropriate information-gathering instruments when seeking to make classroom evaluations.

LEARNING ACTIVITY 2.1

The first step in preparing to evaluate is determining what you will be evaluating and what kind of information you will need in order to make that evaluation. Once that has been determined, you are ready to choose a tool for obtaining that information. There are basically two steps involved: (1) determine the information-gathering technique you want to use, and (2) select the type of instrument that should be used.

TEP 1

Choose an Appropriate Technique

There are basically four different techniques classroom teachers use to obtain information about themselves and their students: inquiry, observation, analysis, and testing.

To inquire is to ask. Whenever you wish to know someone's opinions, feelings, interests, likes and dislikes, etc., ask that person. Good teachers are always asking their students how they feel about what is going on. They know the value of information gained through inquiry.

Observations are made by teachers whenever they look, listen, feel, or use any other senses to find out what is going on in the classroom. Observations of student performances, habit patterns, and interpersonal interactions all provide the teacher with helpful information.

Analysis is the process of breaking something down into its component parts. For example, a teacher might analyze a math assignment to discover the kinds of errors students are making. Or, a vocational education teacher might analyze a coffee table made by a woodworking student, evaluating the project according to the design, overall construction, and finish of the table.

Testing is being used whenever there is a common situation to which all students respond (e.g., a test question), a common set of instructions governing the students' responses, a set of rules for scoring the responses, and a description (usually numerical) of each student's performance—a score.

The chart below compares these four techniques. Study the chart and then try to do the exercise that follows.

A SUMMARY OF THE MAJOR CHARACTERISTICS OF THE FOUR INFORMATION-GATHERING TECHNIQUES*

	Inquiry	Observation	Analysis	Testing
Kind of information obtainable	Opinions Self-perceptions Subjective judgments Affective (especially attitudes) Social perceptions	Performance or the end products of some performance Affective (especially emotional reactions) Social interaction psychomotor skills Typical behavior	Learning outcomes during the learning process (intermediate goals) Cognitive and psychomotor skills Some affective outcomes	Attitude and achievement Terminal goals Cognitive outcomes Maximum performance
Objectivity	Least objective Highly subject to bias and error	Subjective but can be objective if care is taken in the construction and use of the instruments	Objective but not stable over time	Most objective and reliable
Cost	Inexpensive but can be time-consuming	Inexpensive but very time-consuming	Fairly inexpensive Preparation time is somewhat lengthy but crucial	Most expensive but most information gained per unit of time

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* Terry D. TenBrink, *Evaluation: A Practical Guide for Teachers* (New York: McGraw-Hill, 1974), p. 140. © 1974 by McGraw-Hill Book Co. Used with the permission of the McGraw-Hill Book Company.

Your Turn

CHOOSING AN EVALUATION TECHNIQUE

For each of the following questions, decide on the evaluation technique that would probably be most helpful. Use the following key: A, inquiry; B, observation; C, analysis; D, testing.

1. What kind of errors does Sally make when reading aloud?
2. How well can Sammy read?
3. What is George's attitude toward math?
4. Why isn't Ernest completing his workbook during spelling?
5. What is the average reading level of this class?
6. Who does Johnny have as friends?
7. What mistakes are most common in long division problems?
8. How well did the students learn the concepts in Chapter 7?
9. How well does Mary interact with her classmates during recess?
10. What are Kevin's primary handwriting errors?

ANSWER KEY

Your Turn: Choosing an Evaluation Technique

1. B 2. D or B 3. A 4. B or A 5. D 6. A or B 7. C 8. D 9. B 10. C or A

STEP 2

Select the Best Instrument to Obtain the Kind of Information You Need

Once you have selected an appropriate information-gathering technique, you should choose the type of information-gathering instrument to be used. An information-gathering technique is a *procedure* for obtaining information. An information-gathering instrument is a *tool* we use to help us gather information. We will briefly examine four basic types of instruments: tests, checklists, rating scales, and questionnaires.

A test is an instrument that presents a common situation to which all students respond, a common set of instructions, and a common set of rules for scanning the students' responses. Tests are used primarily for determining aptitude and achievement. When we want to know how much a student knows or how well he or she can perform certain skills, a test is an appropriate instrument to use.

Most classroom tests are constructed by the teacher and are referred to as "teacher-made tests" or "classroom tests" to distinguish them from standardized tests. The instructions on standardized tests have been carefully standardized so that everyone taking the test does so under similar conditions. Most standardized tests are developed and sold by test publishers and have been carefully developed, tried out, revised, standardized, and evaluated for reliability and validity.

A checklist is basically a list of criteria (or "things to look for") for evaluating some performance or end product. One uses a checklist by simply checking off those criteria that are met. For example, one could use a checklist to be certain that a student goes through all the routines in an exercise program. Or, a list of criteria for a good speech could be checked as an indication of what a speech student did correctly when making a speech to inform. Whenever it is helpful to know whether an important characteristic is present in a performance (or is found in some end product), a checklist would be an appropriate instrument to use.

If we wish to rate the quality of a performance or end product, a rating scale would be the instrument to use. We might judge a speech, for example, by whether or not gestures were used. But if we want to determine the quality of those gestures (whether they were good, fair, poor, etc.), a rating scale should be used. A rating scale provides a scale of values that describe someone or something being evaluated.

The advantages and disadvantages of each type of instrument are highlighted for you in the following table. Again, study the table carefully and then take "your turn" at trying to select an appropriate instrument.

ADVANTAGES AND DISADVANTAGES OF EACH
TYPE OF INFORMATION-GATHERING INSTRUMENT

Type of Instrument	*Advantage*	*Disadvantage*
Standardized tests: used when very accurate information is needed	Usually well developed and reliable. Include norms for comparing the performance of a class or an individual.	Often not measuring exactly what had been taught. Expensive. Limited in what is measured.
Teacher-made tests: used routinely as a way to obtain achievement information	Usually measure exactly what has been taught. Inexpensive. Can be constructed as need arises.	No norms beyond the class are available. Often unreliable. Require quite a bit of time to construct.
Checklists: used to focus observations	Helpful in keeping observations focused on key points or critical behaviors.	Measure only presence or absence of a trait or behavior.
Rating scales: used to judge quality of performance	Allow observational data to be used in making quality judgments as well as quantitative judgments.	Take time and effort to construct. Can be clumsy to use if too complex.
Questionnaires: used to inquire about feelings, opinions, and interests.	Keep inquiry focused and helps teacher to obtain the same information from each student.	Take time and effort to construct. Difficult to score — no right answers and therefore hard to summarize the data.

Your Turn

SELECTING AN INFORMATION-GATHERING INSTRUMENT

Read each of the following classroom situations. First decide what technique is being used (inquiry, observation, analysis, testing), and then write down which instrument you would use and why. Compare your answers with those of your peers and those found in the answer key.

1. A second grade teacher wants to find out if her pupils now understand how to form the vowels in cursive writing.
2. A high school social studies teacher wants to know how his students feel about the outcome of the latest elections.
3. A fourth grade teacher wants to know how well his class compares to other fourth grade classes in their achievement of the basics: reading, writing, arithmetic.
4. An eighth grade teacher just finished teaching her students to compute the volume of a cube and wants to know how well her students learned this skill.
5. A music teacher wants to rank-order her clarinet players so that she can assign them chairs in the band.
6. A shop teacher wants to make sure that his students all follow the safety precautions when operating a radial arm saw.

c. inquiry—checklist
d. inquiry—test

6. To determine academic aptitude for placement in special programs, one should use a:
   a. rating scale
   b. checklist
   c. classroom test
   d. standardized test

ANSWER KEY

Mastery Test, Objective 2

1. d 2. a 3. c 4. b 5. a 6. d

Objective 3

To write good test items for evaluating achievement.

LEARNING ACTIVITY 3.1

The first step in test construction is to determine what it is you are trying to test and what kind of item would be best suited to testing that type of information. ~~Most classroom tests are used to measure learning outcomes. The best statements of learning outcomes are instructional objectives.~~ As you may recall from the discussion in Chapter 3, instructional objectives define clearly, in observable terms, the achievement we expect of our students. In that chapter the importance of well-chosen verbs in writing instructional objectives was emphasized. The verb should describe precisely the kind of response you expect the student to make to a particular subject matter content. If the verb used in an instructional objective does do that, it is a relatively simple matter to determine the type of test item you should use. For example, suppose that you are trying to find out if your students have mastered the following objectives:

1. To list the names of the first ten presidents of the United States.
2. To describe the major contributions of Washington and Lincoln.
3. To explain the changes that occur when a different political party takes control of Congress.

The first objective obviously calls for a short-answer–type question in which the student is asked to list names. The other two objectives would best be tested with an essay question because the student would have to describe or explain—not the kind of thing they could do on an objective test such as true/false or multiple choice. What kinds of learning outcomes are best measured with objective-test items (true/false, matching, multiple choice)? These types of items are best suited for measuring learning outcomes for which the student must be able to choose among alternatives. For example:

1. To choose the word that best describes the author's feelings.
2. To select the sentence that best represents the democratic position.
3. To identify the emotive language in a paragraph.
4. To determine which of several experiments would most likely provide the information needed by a particular researcher.

Note that each of these objectives could readily be measured with an objective test. However, it is possible to measure some of them with some other type of item. For example, the third objective in the list above (to identify emotive language) could be measured with a variety of test items:

1. *True/false:* The statement underlined in the paragraph above is emotive language.
2. *Multiple choice:* Which of the following sentences (as numbered in the paragraph above) represents emotive language?
   (a) Sentence 2　(c) Sentence 6
   (b) Sentence 3　(d) Sentence 9
3. *Short answer:* Pick out three emotive statements from the paragraph above and write them on your paper.

You can readily see that the first step in selecting the type of item to use is to examine the instructional objectives. However, there is often still room for choice; some objectives can be measured by more than one item type. Consequently, other things must be taken into account. The following table highlights the advantages and disadvantages of the major types of test items. Study this table carefully and then try the exercise "Your Turn."

ADVANTAGES AND DISADVANTAGES OF DIFFERENT TYPES OF TEST ITEMS

Type	Advantages	Disadvantages
Short Answer ✓	Can test many facts in short time. Fairly easy to score. Excellent format for math. Tests recall.	Difficult to measure complex learning. Often ambiguous.
Essay ✓	Can test complex learning. Can evaluate thinking process and creativity.	Difficult to score objectively. Uses a great deal of testing time. Subjective.
True/False ✓	Test the most facts in shortest time. Easy to score. Tests recognition.Objective.	Difficult to measure complex learning. Difficult to write reliable items. Subject to guessing.
Matching ✓	Excellent for testing associations and recognition of facts. Although terse, can test complex learning (especially concepts). Objective.	Difficult to write good items. Subject to process of elimination.
Multiple Choice ✓	Can evaluate learning at all levels of complexity. Can be highly reliable, objective. Tests fairly large knowledge base in short time. Easy to score.	Difficult to write. Somewhat subject to guessing.

Lesson Plan XII
Course Design Decisions

Objectives:

The participants will be able to describe techniques for evaluation through the process of observation.

The participants will be able to write (acceptable) test items.

The participants will be able to write objective test items at the various class levels of the cognitive domain of the Taxonomy of Educational Objectives.

Content

Observation
    Material from classroom teaching skills

    Ways to evaluate performance
    Types of instruments
        check list
        constructing to meet needs
    Establishing criteria and converting to a score

    Writing test items
        Bloom's taxonomy - Handout used

Activities:

Lecture (interactive process) for observation

Writing test items:

put students in groups
Give handout to students and have them construct questions at the various levels ... The hand contains a paragraph on which the students are to base their questions.

Whole group
Have students volunteer to give questions they have constructed. Then construct in various forms of items such as fill in the blank, true and false and multiple choice.

Evaluation:

Construction of questions on the various levels of Bloom's taxonomy.

Assignment:

Complete construction of test items on the various levels of Blooms Taxonomy.

Construct one question relevant to the following paragraph at each level of the cognitive domain.

In Des Moines, Iowa, two high school students and a junior high student, in defiance of a ban by school authorities, wore black armbands to class as a protest against the Vietnam War. As a result, they were suspended from school. But the U.S. Supreme Court later ruled the suspensions were illegal, holding that the first amendment to the Constitution protects the rights of public school children to express their political and social views during school hours.

* * *

This case illustrates a significant new trend in American life. Young people, particularly those under 21, are demanding that they be granted rights long denied them as a matter of course. And, with increasing frequency, they are winning those rights.

1. Knowledge

2. Comprehension

3. Application

4. Analysis

5. Synthesis

6. Evaluation

3. Application level questions

4. Analysis level questions

5. Synthesis level questions

6. Evaluation level questions

ANSWER KEY

Your Turn: Constructing Questions on the Six Levels of Bloom's *Taxonomy*

Here are some questions on the six levels of the *Taxonomy* that you might have asked about the paragraphs. They are not the *only* questions that could have been asked but are simply meant to provide examples.

1. ***Knowledge level questions***
   1. **What action did the three students in Des Moines, Iowa, take that caused their suspension?**
   2. **What was the ruling of the Supreme Court on their case?**
   3. **What part of the Constitution did the Supreme Court refer to as a basis for its decision?**
2. ***Comprehension level questions***
   1. **What is the main idea in this paragraph?**
   2. **In your own words, explain why the Supreme Court declared the suspensions illegal.**

3. *Application level questions*
   1. Considering the ruling in the Des Moines case, what would the legal ruling be on a student who, despite a ban by school authorities, wore a yellow cloth star sewn on her jacket as a protest against the United Nations policy toward Israel?
   2. Considering the Supreme Court ruling in the Des Moines case, what do you think the legal ruling would be on a group of students who blockaded the entrance to a classroom as a protest against race discrimination?
4. *Analysis level questions*
   1. Why did the Supreme Court support the rights of students to express their political and social beliefs during school hours?
   2. What evidence, other than the specific case described in this paragraph, can you cite to support the conclusion that young people are now gaining long denied rights?
5. *Synthesis level questions*
   1. Develop a short story that portrays a young person seeking to attain a legal right denied to those under 21.
   2. If children gained the full legal rights enjoyed by adults in America, what implications would it have for family life?
6. *Evaluation level questions*
   1. What is your opinion on the issue of minors enjoying the full legal rights of adults?
   2. If you had been a judge on the Court in the case of the Des Moines students who protested the Vietnam War with black armbands despite a school ban, how would you have ruled?

LEARNING ACTIVITY 2.2

If you feel that you need further practice in constructing questions or if you would like to improve your question construction skills, Learning Activity 2.2 provides that opportunity. This learning activity involves another way of playing the Question Master Game. All you need do is make one rule change. Instead of using the "Classification Cards" that have already been developed, you must construct a question of your own whenever you land on a square marked with a "C." The question must be at the same level of the *Taxonomy* as the number of spaces you move. Avoid using the same question more than once, and try to vary your question stems.

Example

The die (or cards or spinner) indicates "6," and you move your piece six spaces. If you land on a "C" space, you must construct a question at level six of the *Taxonomy* (Evaluation). If you fail to do this, you must go back three spaces from your original space. If you are successful, you can remain on that space until your next turn.

The "C" spaces now represent *Construct* a question rather than *Classify* a question. All other rules remain the same. Any missed questions result in going backward three spaces.

If the die shows:	*Question must be at:*
1	Knowledge
2	Comprehension
3	Application

Lesson Plan XIII
Course Design Decisions

Objectives:

The participants should be able to construct questions using the various classification levels in the Cognitive Domain of Bloom's Taxonomy. (for evaluating achievement)

The participants should be able to describe how to use information to evaluate students.

The participants should be able to state opinions on articles from the "The National College Newspaper" dealing with grading.

Content:

Writing questions on Bloom's Taxonomic Levels
    Covering - Comprehension, Application, Analysis, Synthesis and Evaluation

Grading

Grading as a type of judgement
    Classroom teaching skills - Cooper 392-394
Judging student progress
    Classroom Teaching Skills - Cooper 394-395

Assigning Test Grades
    Benefit of test and score to student
    Benefit of test and score to instructor
        McKeachie -- 104-105

Assigning Course Grades
    Curving
    Scaling
    University Grading Scales
        McKeachie -- 115-117

Evaluating Changes in Attitude
    Classroom Teaching Skills - Cooper 395-396

News paper articles

From the National College Newspaper - April 1988

"A - F" Grading System Flunk Student's Evaluation

Biology Prof Guarantees "C" or Better

Activities:

Participants will write questions on chalk board (in objective form) using the various levels of Bloom's Taxonomy.
Defend --

Interactive Discussion on Grading

Evaluation:

Construction of question using various levels of Bloom's Taxonomy (for evaluating achievement)

Participation in discussion of Newspaper articles.

Assignment:

Part V in McKeachie -- Teaching Tips
Includes Chapters 19, 20, and 22.

3–6. For each of the following situations, determine the kind of judgment being made. Use the following key: A, norm-referenced; B, criterion-referenced; C, self-referenced.

_____ 3. A third grade teacher discovers that her class scored above the national average on a math achievement test.

_____ 4. A high school biology teacher selected his best students to help him set up the experiments for the next day.

_____ 5. Mitsy's teacher was really pleased because of her progress in reading. Her gains since last year are obvious.

_____ 6. Four of the students who took the algebra aptitude test failed to get a high enough score, and they were not allowed to take beginning algebra.

ANSWER KEY

Your Turn: Types of Judgments

1. B 2. C 3. A 4. A 5. C 6. B

TYPES OF JUDGMENTS

Grading

~~Assigning grades has forever been a task teachers dislike. There seems to be no "fair" way to do it, and any grading system used seems to be subject to all kinds of interpretation problems~~. The next few paragraphs will not resolve the problems of grading, but they should help you to better understand the alternatives available to you.

One of the most common questions teachers get from students concerning grading policy ~~is: "Are you going to grade on the curve?" Whether grades are fitted to a normal curve or just "curved" to make~~ a reasonable distribution, the basic idea behind grading "on a curve" is the same: making norm-referenced judgments, a very common form of assigning grades. The class as a whole is used as a norm group, and the class average usually serves as the referent against which all other grades are judged. Usually the average score is assigned a grade of "C," and some proportion of scores on either side of that average are also assigned grades of "C" (the "C" range usually includes 30 percent to 50 percent of the class). After that, grades are assigned by selecting some cut-off points so that a certain (usually smaller) percentage of students fall into the "B" and "D" ranges, respectively. Finally, those left fall into the "A" and "F" ranges, respectively, as their scores deviate above or below "C."

What do you think are the advantages and disadvantages of this form of grading? List them below and then compare your answers later on with the information in the table on page 398.

Advantages	*Disadvantages*
__________	__________
__________	__________

Remember that whenever you grade someone's work by comparing it to someone else's (or to the average of some group), you are basically using a norm-referenced approach, and all the disadvantages of that type of approach apply.

Another way to assign grades is to establish certain cut-off points for each grade. These cut-off points serve as criteria against which a given student's performance is judged. A common way in which this approach is used is for a teacher to assign points for every assignment and every test. Next, the teacher determines how many total points a student must get in order to get an "A," how many to get a "B," etc. Each assignment or test can be graded that way, and the total number of points for the marking period can be added together and compared to cut-off totals in the same way to assign report card grades. This could be called criterion-referenced grading. However, true criterion-referenced evaluation is a bit more complex than what we have just described because the cut-off scores should be determined on the basis of some meaningful external criterion.

What do you think are the advantages and disadvantages of this kind of criterion-referenced grading?

Advantages	*Disadvantages*

Teachers often find themselves wanting to give a student a good grade for having made so much improvement. Grading on the basis of improvement is a popular kind of self-referenced grading. Comparing a student to himself or herself is a desirable, humane way to grade. However, this kind of grading has many disadvantages. Can you think of some of them? After writing down your ideas, study the following table.

Advantages	*Disadvantages*

ADVANTAGES AND DISADVANTAGES OF DIFFERENT TYPES OF GRADING

Type of Grading	Advantages	Disadvantages
Norm-referenced	1. Allows for comparisons among students 2. Classes can be compared to other classes 3. Allows teacher to spot students who are dropping behind the class	1. If whole class does well, some students still get poor grades 2. If class as a whole does poorly, a good grade could be misleading 3. Does not allow individual progress or individual circumstances to be considered 4. The whole class (or large portions of it) must be evaluated in the same way 5. Everyone in class (or norm group) must be evaluated with the same instrument under the same conditions
Criterion-referenced	1. Helps teacher to decide if students are ready to move on 2. Criteria are independent of group performance 3. Works well in a mastery-learning setting 4. Each individual can be evaluated on different material, depending on his or her level of achievement	1. It is difficult to develop meaningful criteria (therefore arbitrary cut-off scores are often used) 2. Presents unique problems in computing the reliability of criterion-referenced tests 3. Makes it difficult to make comparisons among students
Self-referenced	1. Allows you to check student progress 2. Makes it possible to compare achievement across different subjects for the same individual	1. All measures taken on an individual must be taken with similar instruments under similar circumstances 2. Does not help you to compare an individual with his or her peers

Judging Student Progress

Teachers have an ongoing concern about the amount of progress their students are making. If students are making a reasonable amount of progress, the methods, materials, etc., are probably working. If no progress or too little progress is being made, some changes may need to be made somewhere in the instructional program.

A judgment of student progress is, of course, a self-referenced judgment, and thus all the disadvantages of that type of judgment will hold. It is especially important that progress in achievement be measured the same way each time progress is checked. For example, suppose that you were trying to check a student's progress in reading. It would be best if you could use the same type of test each time progress was checked (alternate forms of the same standardized tests; observations of oral reading, using the same type of checklist or rating scale, etc.).

The following suggestions should help you do a good job of evaluating student progress. Study them carefully and then discuss with your classmates ways in which these suggestions could be carried out at various grade levels for different subject matters.

Suggestions for Evaluating Student Progress

1. Determine ahead of time what student characteristics or skills you are going to keep track of (don't suddenly ask, half way through the semester, "Has any progress been made?").

2. Establish a baseline (achievement level, behavior patterns, etc.) early in the semester.
3. Choose and/or develop instruments (tests, rating scales, etc.) in advance that you can use throughout a student's progress.
4. Describe the changes you expect will occur as your students progress. This description will help you focus your evaluation on appropriate behaviors and achievements.
5. Obtain information often enough so that you can see any progression that might be occurring and so that a single bad sample of information won't throw your evaluation off.

Evaluating Changes in Attitude

Most psychologists would define an attitude as a predisposition to act in a negative or positive way toward some object or person. Note that the attitude is a *predisposition*, which is not observable or measurable. However, it is a predisposition to *act*, and that *is* observable. This means, then, that in order to measure attitudes, one must focus on the actions or behaviors of students. Of course, the difficult part is discerning what any given action or pattern of actions means (i.e., what the attitude is that is producing the actions).

Usually, a teacher becomes concerned about attitude change when he or she discovers that one or more students have a bad attitude. Common among these are bad attitudes toward a given subject matter, a negative attitude toward the teacher, or feelings of prejudice toward minority students in the class. The important thing to remember when you first become aware of a bad attitude is that there must have been some behaviors that led you to discover that attitude. The student(s) must have said some things (speech is an observable behavior), done some things, or refused to do some things that made you aware of the attitude. Your first step, therefore, is to try to determine what specific behaviors led you to believe that there was an attitude that needed changing.

Once you have determined the behaviors associated with an attitude you think should change, your next step is to systematically obtain information about the frequency of occurrence of those behaviors. These data will serve as the baseline (the referent) against which you will judge any future changes in attitude.

When you are sure that the behaviors you observed are frequent and do indeed represent an inappropriate attitude, you are ready to set down a plan for observing any possible changes in attitude (as they would be reflected in changes in behaviors). There are two very important things to consider at this point. First, be certain that you make frequent observations so that you can feel confident that the behavior you are observing is representative and not isolated. Second, look for the behaviors when the student is in the presence of or thinking about the object of his or her inappropriate attitude (e.g., look for cutting-up behaviors during math if the student dislikes math).

Finally, when the information is obtained, you must judge whether or not the attitude has changed. Remember the disadvantages of making self-referenced judgments. Differences between any two sets of observations may not mean too much. However, if you find over a period of time (and attitudes usually take considerable time to change) that the undesirable behaviors are decreasing and the desirable ones increasing, an attitude change is probably occurring.

You may find it very helpful to use a rating scale to help you summarize the data from your observations. Suppose, for example, that you were trying to see if a student's attitude toward math were improving. You might develop a rating scale that would look something like this:

Hates math *1*	*2*	*Tolerates math* *3*	*4*	*Loves math* *5*
Complains about math; puts off doing assignments; turns in sloppy math papers		Says, "Don't care about math grade"; does assignment but delays same; never chooses math over other subjects		Says, "I like math"; gets right at assignments; does extra-credit work; chooses math over other subjects

Note that the behaviors characteristic of different attitudes have been placed under the two end points and the midpoint of the scale. Each time we observed our student react to math, we could determine which set of behaviors his or her actions were most like and mark an "X" on the scale accordingly. Several scales marked each in turn over a semester would give us a picture of any progress the student was making.

In summary, the basic steps involved in evaluating a student's change in attitude are as follows:

1. Determine the behaviors associated with the attitude you think should change.
2. Systematically obtain information about the frequency of occurrence of these attitudes.
3. Decide if the behaviors occur frequently enough and consistently enough to represent an inappropriate attitude.
4. Set down a plan for observing any possible changes in attitude over time.
5. Decide whether the attitude has changed by comparing the information obtained at two or more different times.
6. Record your findings—possibly using a rating scale.

Evaluating Instruction

Most teachers have a real desire to know whether or not their instruction is effective. They also fear that they, or their principal, will find out that it is not effective. Principals, fellow teachers, students, and parents are all going to be judging the quality of instruction. Therefore it is advantageous for the teacher to have well-documented evidence of his or her teaching effectiveness.

Of course, besides accountability, teachers are concerned about improvement. They are always wanting information to help them upgrade their courses. So let's explore briefly some of the options available to teachers who wish to evaluate their own teaching. The information provided here will help you start thinking about evaluating instruction, but it in no way pretends to make you an excellent evaluator. Several books on program evaluation are cited in the references at the end of this chapter. Later, you may have an opportunity to enroll in a program-evaluation course. In the meantime, here are a few basic suggestions.

There are two primary considerations in evaluating your own instruction. First, you must determine the kind of information you will obtain about the effectiveness of your instruction. Second, you must determine an appropriate referent for judging the effectiveness of your instruction.

There are at least three kinds of information that can be used to determine the effectiveness of your instruction. The first is information about your own behaviors as a teacher. If you feel, for example, that good instruction occurs when teachers do certain things (e.g., provide behavioral objectives for their students, interact a great deal with their students, or ask certain types of questions during instruction), obtaining information about whether or not you do these things is a place to begin in the evaluation of your teaching. Many teacher-effectiveness rating scales do focus on such teacher behaviors. Although this kind of information can be helpful to you as you check your own progress as a teacher, it may be misleading about the *effectiveness* of instruction. A teacher's doing certain things doesn't necessarily ensure either good teaching or improved learning.

A more popular (and slightly better measure) of teaching effectiveness comes from student ratings of teacher effectiveness. There are a number of fairly well-developed instruments that allow the students to evaluate their teachers. If you decide to design one of your own, focus on those characteristics of good teachers which seem to make a difference. Even open-ended questions, e.g., "What did you like best about this class?" or "What could be done to make this class more effective?" can sometimes give the teacher useful information.

Of course, the ultimate test of teaching effectiveness is how well the students learn. There are several problems, however, with using learner achievement as a measure of teaching effectiveness. First, students may learn well despite the teacher. Second, it is difficult to know what would have happened had a teacher used a different approach; even though the students learned well, could they have learned better? Or, suppose that a class does very poorly. Were there extenuating circumstances? Were the textbooks poorly written? Would the students have done that poorly had another teacher taught the lesson? These last questions are not easy to answer, but they do suggest an important solution to the many problems of evaluating instructional effectiveness. That solution is to evaluate the various *components* of the instructional process separately rather than trying to obtain an overall measure. Suppose, for example, that we were developing a rating scale for students to evaluate the instruction in a high school English class. Instead of focusing all our questions on the teacher, we would also ask questions about some of the other components of instruction in that classroom. We might ask the students for their opinions about such things as the textbook, the workbook, the library assignments, the small-group discussions, the tests, etc.

A second major consideration when evaluating instruction is the choice of an appropriate referent. You must decide what you are going to use to compare your teaching to. Will you compare it to other teachers (e.g., by comparing your students' standardized achievement scores to the scores of other classes in your school district)? Or, will you be judging your teaching effectiveness by some predetermined criterion (e.g., "At least 80% of my students should score at or above grade level on the *Iowa Test of Basic Skills*)? Or, will you use a self-referenced approach (e.g., comparing the student ratings from this semester with those of the previous two semesters)? All three of these

Biology prof guarantees C or better

By Tina Burnside
▪ The Minnesota Daily
U. of Minnesota, Twin Cities

Genetics and cell biology professor Val Woodward has an offer most University students can't refuse. If you take his heredity class, he'll guarantee you won't get a D or an F. This quarter, more than 600 students are enrolled in Biology 1101: Heredity and Human Society.

"I had heard from other students that it was an easy class, so I took it," said junior Lisa Smith. "I barely went to class except on the quiz days, but I passed. It was great."

But Woodward has a reason for his grading policy. "This is not a class designed to weed people out," he said. "It is designed to help students gain an insight about themselves and give them a general understanding of genetics.

Woodward awards 25 percent of his class As, 50 percent Bs, and 25 percent Cs. Students who don't pass are given an incomplete. He admits that most students, but not all, take the course because it is considered easy.

Professors are free to determine their own grading policies, said Kathie Peterson, director of student services in the Genetics and Cell Biology Department.

"I'm taking the class because I have an interest in genetics and the class seems interesting," sophomore Tony Giombetti said.

"I like the idea of the teacher not wanting to hold students back, and that he is more concerned with students learning concepts rather than just memorizing facts."

Woodward said many introductory courses are in danger of being eliminated under the University's Commitment to Focus improvement plan.

"They would like to get rid of these courses. They want students to enter the University ... and start working directly on their majors, and not fool around with these so-called 'Mickey Mouse' courses," he said.

"I flatly disagree. This class is designed to give everyone an equal opportunity to an education, not to eliminate a few."

EDUCATION

A-F grading system flunks student's evaluation

By Steve Fifield

• The Minnesota Daily

U. of Minnesota, Twin Cities

For students, death and taxes are not the only certainties in life. Grades can be added to this pair to create an unpleasant trio. The efficacy of the A-F grading system has been uncritically accepted by most educators, students and parents; it is tightly linked with our notion of education, while labeling students as "winners," "losers" or "just average" in the process.

Why do schools give grades? The most cynical explanation—that students would not do any work without the stimulus a grading system provides—points to some very serious flaws in our formal education system. It is the task of teachers to challenge students with relevant material and to present it in creative and stimulating ways. It is the task of students to leave the mind-numbing attractions of our video culture behind and engage wholeheartedly in their own education—a worthwhile goal in its own right.

Grades serve as verdicts rather than diagnostic aids. A "C" on an exam probably indicates misconceptions a student should clear up before continuing on to new material. Given a chance to review the material in light of mistakes, that person could become a "B" student. Unfortunately, some instructors believe this approach is too easy on students—an attitude arising from the mistaken notion that the purpose of teaching is to assign grades rather than promote learning.

While the A-F grading system is deeply entrenched in the education system, instructors can make their courses more positive experiences for students. The first obstacle many college instructors must overcome is the tendency to teach as they were taught. Today's professors need to think about alternative teaching techniques.

All instructors should consider producing a set of specific learning objectives for their courses and make these available to students on the first day of class. Professors should also clearly state and justify the competence level required to earn a certain grade.

The best courses incorporate instructional objectives, criterion-referenced grading and some form of mastery learning.

Learning is not easy and first attempts are often inadequate. No group of people should understand this better than professors who have struggled to complete articles, grant proposals or books only to have them rejected and returned for revision. Grades stick with students for a long time, and students are entitled to give their best possible performance before receiving a final grade.

Using the A-F grading system in a more equitable way will require the cooperation of professors, students and administrators. Innovative teaching must be valued as much as the research money pulled in by the faculty. Now is the time to be more open-minded and creative about teaching.

Lesson Plan XIV
Course Design Decisions

Objectives:

The participants will develop a familiarity with the research on class size.

The participants will be able to determine when classes need to be small and the kinds of students that benefit from small classes.

The participants will develop a familiarity with the relationship between goals, class size and methodology.

Content: (Chapter 19 McKeachie)

Research on class size.

Determining when classes need to be small.

Kinds of students that benefit most from small classes.

Goals class size and methodology.

Activities:

Interactive presentation on the above topics.

Course evaluation

Evaluation:

Participation in the interactive process

Below are several optional open-ended questions designed to provide the instructor feedback on his/her instructional techniques, and to allow you the opportunity to express more precisely your opinion of the course. These are intended to be anonymous. **SO PLEASE DO NOT SIGN YOUR NAME. THE FORMS WILL NOT BE EXAMINED BY EITHER THE INSTRUCTOR OR THE DEPARTMENT UNTIL AFTER GRADES HAVE BEEN ASSIGNED!**

A. What were the strong points of the course?

B. What were the weak points of the course?

C. What should the instructor do to improve his/her teaching?

D. What is your overall opinion of the course?

Reading List
College Teaching Preparation

Adler, Mortimer J., The Paideai Proposal: An Educational Manifesto (New York: MacMillan, 1982)

Alexander, A. Astin., Four Critical Years (San Francisco: Jossey-Bass, 1977)

Art and Craft of Teaching, Editor: Margaret M. Gullette, (Cambridge, Mass.: Harvard-Danforth Center for Teaching and Learning, 1982)

Axelrod, Joseph., The University Teacher as an Artist (San Francisco: Jossey-Bass, 1973)

Belenky, Mary F.; Clinchy, Blythe M.; Gooldberger, Nancy R.; and Tarule, Jill M., Women's Ways of Knowing: The Development of Self, Voice, and Mind (New York: Basic Books, 1986)

Bell, Daniel., Reforming General Education (New York: Columbia University Press, 1966)

Bennett, W., To Reclaim a Legacy (Washington, D.C.: National Endowment of the Humanities, 1984)

Bloom, B.S., Englehart, M.D., Furst, E.J., Hill, W.H. and Krathwohl, D.R. Taxomy of Educational Objectives: Handbook I, Cognitive Domain (New York: David McKay, 1956)

Bok, Derek., Higher Learning (Cambridge: Harvard University Press, 1986)

Boyer, Ernest L., College: The Undergraduate Experience in America (New York: Harper and Row 1987)

Brown, James and Thornton, James., College Teaching: A Systematic Approach (McGraw Hill, 1971)

Brubacher, J.S., On the Philosophy of Higher Education (San Francisco, Jossey-Bass, 1982)

Carnegie Foundation for the Advancement of Teaching, The Control of he Campus: A report on the Governance of Higher Education (Princeton: rinceton University Press, 1982)

hickering, Arthur., Education and Identity (San Francisco: Jossey-ass, 1974)

ickering, Arthur and Associates., The Modern American College (San ancisco: Jossey-Bass, 1981)

Cross, K. Patricia., Accent on Learning: Improving Instruction and Reshaping the Curriculum (San Francisco: Jossey-Bass, 1976)

Dubin, R. and Taveggia, T.C., The Teaching-Learning Paradox (Center for the Advanced Study of Educational Administration: University of Oregon, 1968)

Eble, Kenneth E. The Craft of Teaching (San Francisco: Jossey-Bass, 1976)

Eble, Kenneth E., Professors as Teachers (San Francisco: Jossey-Bass, 1972)

Epstein, Leon D., Governing the University: The Campus and the Public Interest (San Francisco: Jossey-Bass, 1974)

Feldman, K. and Newcomb, T., The Impact of College on Students (San Francisco: Jossey-Bass, 1969)

Fuhrmann, Barbara S. and Grasha, Anthony F., A Practical Handbook for College Teachers (Boston: Little, Brown and Company, 1983)

Gage, N.L., The Scientific Basic of the Art of Teaching (New York: Teachers College Press, Columbia, University, 1977)

Gronland, N.E., Stating Objectives for Classroom Instruction, 2nd ed., (New York: Macmillan, 1978)

Hoover, Kenneth E. College Teaching Today: A Handbook for Postsecondary Instruction (Boston: Allyn and Bacon, 1980)

Hopkins, K.D. and Stanley, J.C., Educational and Psychological Measurement and Evaluation (Englewood Cliffs, N.J.: Prentice Hall, 1981)

Hyman, Ronald T., Way of Teaching, 2nd ed., (Philadelphia: J.B. Lippincott, 1974)

Kolstoe, O.P. College Professoring (Carbondale: Southern Illinois University Press, 1975)

Kozma, Robert, Belle, L. and Williams, G. Instructional Techniques in Higher Education (Englewood Cliffs, NJ: Educational Technology Publication, 1978)

Levine, Arthur., Handbook on Undergraduate Curriculum (San Francisco: Jossey-Bass, 1978)

Lowman, Joseph, Mastering the Techniques of Teaching (San Francisco: Jossey-Bass, 1984)

Mager, Robert F., Preparing Instructional Objectives (Belmont, CA: David Lake Publishers, 1984)

Maier, N., Problem-solving Discussion and Conferences: Leadership Methods and Skills (New York: McGraw-Hill, 1963)

Mann, R.D. The College Classroom (New York: J. Wiley, 1970)

Mayhew, Lewis., The Collegiate Curriculum: An Approach to Analysis (Atlanta: Southern Regional Education Board: Atlanta, 1967)

McKeachie, Wilbert J., Teaching Tips: A Guide Book for the Beginning College Teacher (Lexington, Mass: D.C. Heath, 1986)

Milton, Ohmer, and Associates, On College Teaching (San Francisco: Jossey-Bass, 1978)

Olmstead, J.A., Small-group Instruction: Theory and Practice (Alexander, VA: Human Resources Organization, 1974)

Perry, William G., Forms of Intellectual and Ethical Development in the College Years (New York: Holt, Rinehart and Winston, 1970)

Rudolph, Frederick., The American College and University: A History (New York: Knoph, 1962)

Small Group Discussion: A Reader, 2d ed., eds. Cathcart, Robert S. and Samovar, Larry A. (Dubuque, Iowa: William C. Brown, 1974)

Sykes, Charles J., ProfScam: Professors and the Demise of Higher Education (Washington, D.C. Regnery Gateway, 1988)

Tchudi, S.N., Teaching Writing in the Content Area: College Level (Washington, D.C.: National Educational Association)

GENERIC COLLEGE TEACHING SKILLS
Course II

Course Description:

Generic College Teaching Skills is the second of a three course sequence during which the participants will be involved in the development of teaching skills and the demonstration of those skills in a classroom setting and will receive appropriate feedback.

Course Goals:

1. The participants will develop an understanding of the skills and knowledge necessary for teaching.

2. The participants will develop an understanding of the skills necessary to observe teaching performances and provide effective feedback.

Course Objectives:

1. Classroom Techniques

    By the end of the course the participants will have developed knowledge and the ability to demonstrate the following techniques.

    A. Meeting Class for the First Time.
    B. Written Assignments
        - Videotapes
            - How to evaluate unconventional papers
            - Possible Plagiarism
            - Working student needs time extension on paper
    C. Grading
        - Videotapes
            - Student protests exam grade
            - "I need an A. What do I have to do to get an A?"
            - Student requests extra work
            - Is attendance required?
            - Student feels exams were unduly difficult

2. Instructional Procedures

    By the end of the course participants will demonstrate a knowledge and use of the following teaching skills.

    A. Questioning Strategies
    B. Feedback for Learning
    C. Leading Discussions
        - Videotape
            - Student-student conflict in discussion
    D. Notes and Notetaking
    E. Review Processes
    F. Model for Effective Teaching

3. Instructional Methods
By the end of the course the participants will demonstrate a knowledge of the following Instructional Methods and use of selected instructional methods.

   A. Inquiry Method
   B. Discussion

4. Evaluating Teaching Performances

By the end of the course the participants will develop and carry out an evaluation plan.

   A. Evaluation of Teaching Performance
   B. Evaluating Teachers
   C. Soliciting Feedback from Students

Text

McKeachie, Wilbert J., Teaching Tips: A Guide for the Beginning College Teacher (Lexington, Mass.: D. C. Heath; 1986).

Course Evaluation

The grade to be reported at the end of this course will be an "S" or "U". Grades are based on the following activities, and performance is assessed according to standards specified by the professor: participation in class discussion and presentation of class assignments, presentation of data from two observations on one of your peers, evidence of two observations by your faculty coordinator, and one observation by the course instructors.

The observations will be made on the demonstration of selected teaching behaviors. The observations will be submitted to the course instructors. A form will be provided for the observation.

Course Instructors

Gene Shepherd 205 Collings Hall 325-1508	Tony Romano 230A Collings Hall 325-3972

Course II
Generic College Teaching Skills
Schedule of Events

Week I

Content
- Describe Syllabus
- Process for meeting class for the first time

Assignment
- Read Chapter 10--McKeachie: "Term Papers and Teaching Writing"

Week II

Content
- Term Papers
- Alternative ways of working with students on written assignments
- Correcting papers and giving feedback
- Role Play (How To)

Week III

Content
- Role Play - Incidents on written assignments

Assignment
- Read Chapter 9--McKeachie: "The ABC's of Assigning Grades"

Week IV

Content
- Assigning Grades
- Role Play - Incidents on Grading

Week V

Content
- Grading
- Class Concerns and Conflict

Assignment
- Read Handout on the Model for Effective Teaching

Observation
- By Faculty of Students Taking Course

Week VI

Content
Model for Effective Teaching

Assignment
Observe a faculty member teaching:
From observation cite evidence that the faculty member follow the lesson line.

Observation
By Faculty of Students Taking Course

Week VII

Content
Question Sequencing Elements
- a. Distribution
- b. Load
- c. Wait Time
- d. Student Response
- e. Teacher Response

Assignment
Observe a faculty member teaching
Audio Tape the teaching episode
Analyze the questions to determine which and how many students participated and the cognitive level of the questions.

Observation
By Faculty of Students Taking Course

Week VIII

Content
Classification and Analysis of Classroom Questions

Assignment
Tape class you teach:
Observe for--Tape, Load, Wait Time, Participation, Dead end, Run On, Programmed Answer, Put Down, Fuzzy, Convergent, Divergent Questions

Observation
By Faculty of Students Taking Course

Week IX

Content
Corrective Feedback
Reinforcements

Assignment
From the Tape of Class you recorded:
Check for corrective feedback and reinforcements to questions.

Observation
By Faculty of Students Taking Course

Week X

Content
Corrective Feedback and Reinforcement on data collected by students from a class which they taught.
Discussion of Data Collected by Program Faculty from classes which the students taught.

Observation
By Faculty of Students Taking Course

Week XI

Content
Discussion
Role Play - Incidents Concerning Discussion

Observation
By Faculty of Students Taking Course

Week XII

Content
Inquiry Process
Notes and Notetaking

Assignment
Read Chapter 30--McKeachie--Student Ratings on Faculty

Observation
By Faculty of Students Taking Course

Week XIII

Content

Review Processes
Develop Student Evaluation Questionnaire

Assignment

Administer the developed evaluation to students in your classes and summarize information.

Observation

By Faculty of Students Taking Course

Week XIV

Content

Students' Evaluation
Student Ratings of Faculty
Course Evaluated
Teacher Behavior Inventory

Course 2

Generic College Teaching Skills

Lesson Plan I

Objectives:

The participants will acquire basic knowledge of the expectations of course 2.

The participants will acquire the basic knowledge of a process for meeting a class for the first time.

Content:

Syllabus for Course 2

Process for Meeting a Class for the First Time:
(See Attached Notes)

Activities:

Introductions

Handout and Describe Syllabus

Interactive process on meeting a class for the first time.

Assignment:

Read Chapter 10 in McKeachie
"Term Papers and Teaching Writing"

Evaluation:

Participation in the interactive process on Meeting Class for the First Time.

Process for Meeting a Class for the First Time

1. Break Ice

   Have them talk -- Get acquainted in some fashion

   You want to establish a degree of freedom of communication in your class.

   Have your objectives for the course written on the board discuss objectives.

2. Present Syllabus

   to include course outline

3. Introduce Text

   If there is going to be disagreement between material in the textbook and that you will present in class an explanation is in order.
   Avoid tirades against the author -- severe criticism

   Explain that rival interpretations stand or fall on the basis of pertinent evidence and plan to give your reasons for disagreeing with the text.
   - This will give the student the notion that your opinions are based upon evidence.
   - It will frequently point up current problems in the theory that often have great appeal for the serious student.

4. Problem Post

   What problems you'd like to tackle during this course?
   What problems you'd like to have us tackle during this course?
   What sort of concerns do you think we might deal with?
   What kinds of things have you heard about this course?
   Record Answers on the chalkboard.

   Allows for participation
   - Understand rather than compete with one another
   - reduce attitude that everything must come from the teacher
   - teacher can listen as well as talk
   - some responsibility for solving own problems

5. Hand out an Index Card

   ask the students to write down what they think of the first class anonymously

   1. Indicates interest in learning from them and start building a learning climate -- and influencing your teaching.

2. It gives you feedback, often revealing doubts or questions students were afraid to verbalize orally.

Content

----- Establishing a good atmosphere for a class is an important aspect of teaching well
Getting off to a good start is as important to that atmosphere as what comes after.

----- First class should be interesting and challenging

To a group of students first class is going to be exciting and anxiety producing

The teacher who hands out the syllabus and leaves does not convey the message that the class is valuable nor do they capitalize on the excitement

----- Remember this is not the students only class
They come to you from other classes
Must aid in shifting thoughts and feelings

----- Can gradually ease them into the course

Can grab their attention by doing something different

Course 2

Generic College Teaching Skills

Lesson Plan II

Objectives:

The participants develop alternative ways of dealing with writing in the classroom.

The participants will develop processes for correcting papers and giving feedback.

The participants will develop the skills necessary for the technique of Role Play.

The participants will participate in Role Playing activities on incidents concerning written assignments.

Content:

Chapter 10 McKeachie
    Term Papers and Teaching Writing

Term Papers:
    Problems
    Alternative ways of working with students on writing papers.
    --Break Process (Series of Reports)
    --Library Research Paper
    --Other types of writing

Correcting Papers and Giving Feedback

Role Playing
    Handout on ground rules for Role Play.

    View tape of Role Playing process to introduce the students to the process.

    View tape of Role Playing process to introduce the students to the process.

View Tape of Incidents on Writing:

    --Extension on paper
    --Possible Plagiarism
    --Evaluating Unconventional Papers
    --(Probably won't get to all of these)

Activities:

Interactive process on Writing

View film on Role Play
  Use handout and work with how to role play.

View film of Incidents
  Written Assignments and Role Play

Evaluation:

Participation in interactive process on writing.

Participation in role playing.

Ground Rules for Role Playing on:

"How to Handle Classroom Problems"

1. Let the situation be real. Although we may think we would never let ourselves get into a situation like this, we have all had the experience of getting into situations we did not think we would get into.

2. Be the teacher and the student you see. For the same reasons as in Number 1.

3. Don't worry about the "best" response. Rather, search to find a "good" response or a "better" response.

4. Your criteria should be: let the student leave with the relationship at least no worse than when the student entered.

5. Don't just talk about how you would handle the situation, but actually "act out" the situation. You need to feel the pressure of time and yet go beyond a "quick response."

6. When you role play the student, don't "roll over and play dead." That is, don't give up this student's felt needs too easily. By the same token, don't be unreasonably obstinate. Play the role as you think this student would, given the way they feel.

7. The teacher might want, from time to time, ask for information from the student. In this case, it helps the role play. In real life, it also gives you valuable time to think as well as valuable information.

8. As the teacher, you need to respond to the student with respect for the student's feelings. Assume the student wants to do something they feel is right for them; respect that, even if you do not agree with it.

9. Be honest with yourself and the rest of the group about how you would really react.

10. Try to empathize and understand, really understand, the student's situation and feelings.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
" 3: Overly talkative student
" 4: Students whispering in class
" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan III

Objectives:

The students will participate in Role Playing activities on incidents concerning written assignments.

The participants will develop skills in handling students problems during conferences through the role playing activities.

Content:

Role Playing

Tapes of incidents on written assignments.

Episodes
1. Time Extension
2. Possible Plagiarism
3. Evaluating Unconventional Papers

Activities:

View tapes of incidents on written assignments and have the participants role play.

One participant will play the faculty member and another participant will play the student.

After role play----discussion by other members of the class to ascertain the success of the conference.

Assignment:

Read Chapter 9 in McKeachie
"The A B C's of Assigning Grades"

Evaluation:

Participation in role play.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
" 3: Overly talkative student
" 4: Students whispering in class
" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan IV

Objectives:

1. The participants will participate in an Interactive discussion on assigning grades.

2. The participants will participate in Role Playing activities on incidents concerning grading.

Content:

1. Review of assigning grades.
   McKeachie--Teaching Tips--pages 110 through 121

2. Role Play
   Tapes of Incidents on Grading

   1. I need an A what do I have to do to get an A?
   2. Student protests exam grade
   3. Student requests extra work
   4. Is attendance required
   5. Student feels exams were unduly difficult

Activities

Interactive Process to review grading

View Tapes of incidents on grading and Role Play

Evaluation

Student participation in the activities.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
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II. Student/Class Concerns and Conflicts

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Tape #3

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Incident 1: Student: teacher & text ignores minority students
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" 5: Student protests personal treatment
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IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Play V

Objectives:

1. The participants will participate in Role Playing Activities on incidents concerning grading.
2. The participants will participate in Role Playing Activities on incidents concerning class concerns and conflicts.

Content:

1. Tapes of Incidents on Grading
    - a. Is attendance required
    - b. Student feels exams were unduly difficult.
2. Tapes on Class Concerns and Conflict
    - a. Class is uncooperative with teacher
    - b. Overly talkative student
    - c. Student sleeps in class
    - d. Students whispering in class
    - e. Student needs a lots of inclass explanations
    - f. Student introduces lots of personal ideas

Activities:

View Tapes of incidents on grading and role play.

View Tapes of incidents on Class Concerns and Conflict and Role Play.

Evaluation:

Participants participation in the activities.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
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" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

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Incident 1: Working student needs extension on term paper.
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" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan VI

Objectives:

1. Participants will develop a basic knowledge of the "Lesson Line" adapted from the Program for Effective Teaching"

Content:

Model for Effective Teaching:
    Explanation of the Lesson Line
    1. Set

    2. T_2O

        Explanation
        Questions
        Respond to Learner
        Direction Giving
        Activities

    3. Closure

See Handout:

Activities:

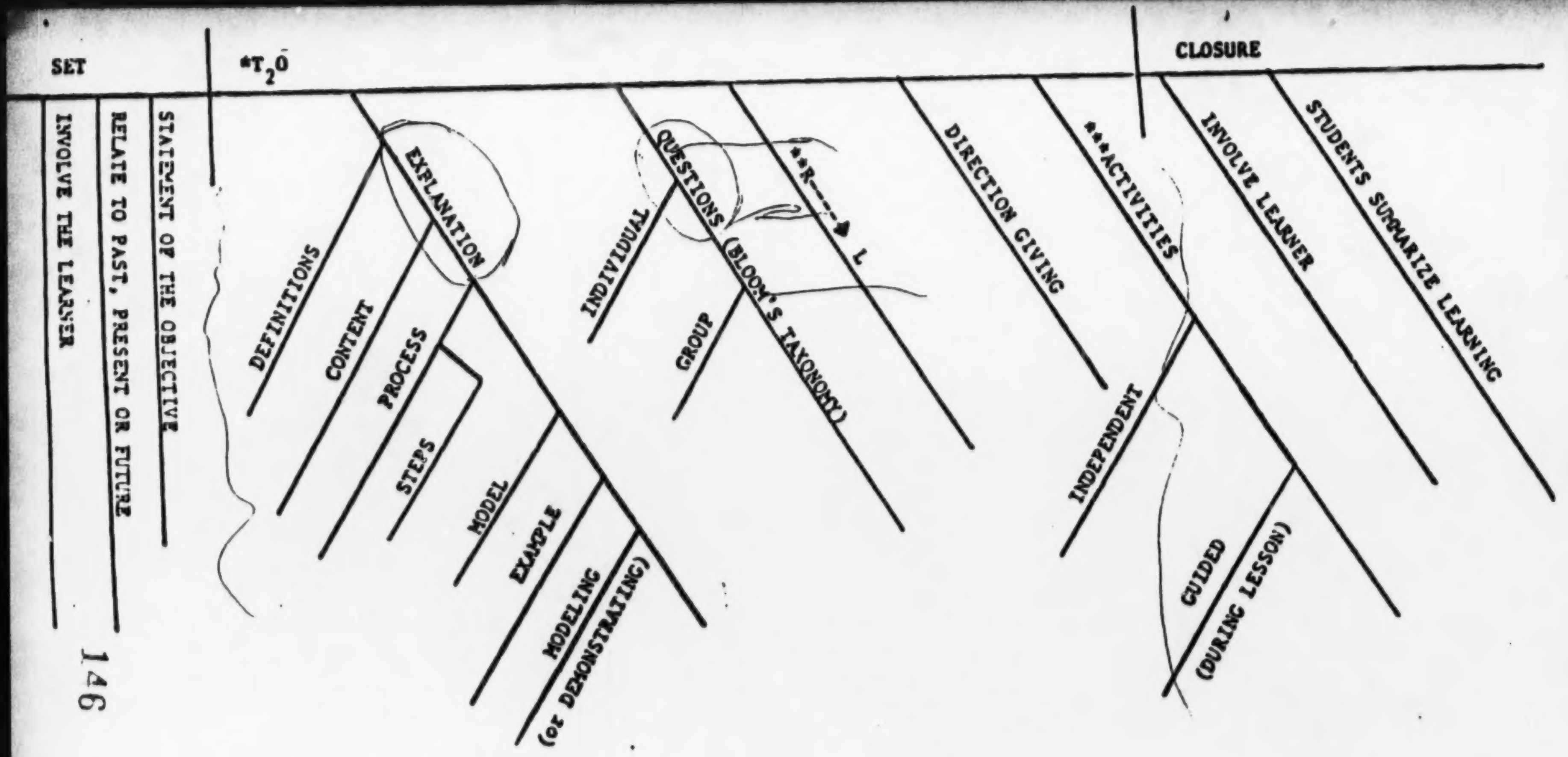
Interactive discussion on the Model for Effective Teaching

Assignment:

Observe a faculty member teaching:
    From observation cite evidence that
        the faculty member followed the lesson line.

Evaluation:

Participation in the lesson.


SET
INVOLVE THE LEARNER
RELATE TO PAST, PRESENT OR FUTURE
STATEMENT OF THE OBJECTIVE
*T2O
EXPLANATION
DEFINITIONS
CONTENT
PROCESS
STEPS
MODEL
EXAMPLE
MODELING (or DEMONSTRATING)
QUESTIONS (BLOOM'S TAXONOMY)
INDIVIDUAL
GROUP
**R——→ L
DIRECTION GIVING
***ACTIVITIES
INDEPENDENT
GUIDED (DURING LESSON)
CLOSURE
INVOLVE LEARNER
STUDENTS SUMMARIZE LEARNING

--CHECK YOUR TEACHING. DO YOUR LESSONS HAVE ALL OF THE PARTS OF THE LESSON LINE? GREAT!

* T_2O - TEACH TO THE OBJECTIVE.

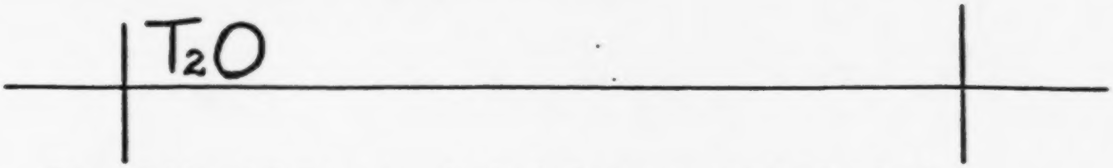
**R → L - RESPONDING TO THE LEARNER INCLUDES REPEATING THE CORRECT ANSWER, GIVING POSITIVE FEEDBACK AND SAYING THE STUDENTS'S NAME.

***ACTIVITIES - GUIDED - ALLOWING STUDENTS TO PRACTICE WHAT YOU TEACH.
INDEPENDENT - WHEN THEY MASTER THE WORK GIVE THEM SEATWORK OR HOMEWORK.

ADAPTED FROM THE PROGRAM FOR EFFECTIVE TEACHING MODEL.

THE LESSON LINE

The Lesson Line provides a structure for describing and analyzing what good teachers do when they teach a lesson in the deductive mode. There are three major parts to the Lesson Line. The largest part and the center part of the Lesson Line is referred to as T_2O, Teaching to the Objective.



The definition of T_2O is generating in the learner overt behavior that is relevant in the learning.

There are five components in Teaching to the Objective. They are:

Component I: EXPLANATION refers to how we give the learning, the information, to the students. Six ways of giving explanation have been recommended.

a. Definition - stating the definition of the concepts or terms to be learned.
   - Ex: A set is a collection of objects that have something in common.
   - Ex: A fault is a crack in the earth's surface.
   - Ex: Migration is the trip animals make when they change home sites from one season to another.

b. Content - presenting statements of fact that describe concepts, that describe objects, people, situations, or events; and presenting generalizations that relate two or more concepts. This information can be presented verbally by the teacher or through some other auditory or visual stimuli.

c. Process - presenting in sequential order the steps involved in doing something.
   - Ex: Talking through the steps of a math formula or any problem solving process.
   - Ex: Presenting the steps in film making.
   - Ex: Presenting and talking through the steps of finding words in the dictionary using guide words.

d. Model - Presenting a concrete representation of the concept or idea that you want children to understand.
   - Ex: An actual object like an apple or a cow's heart.
   - Ex: A scaled representation of a building, a volcano, an atom, a dinosaur, a terraced field, or the solar system.
   - Ex: A full size representation of something, like, the skeleton of a persons body, a set of teeth, or a machine that is constructed in such a way that the workings of the inner parts can be seen.

e. Example - one of a number of items that are members of a class or category labeled as a concept. Examples can be presented in concrete form, semi-concrete form, semi-abstract form, or abstract form.
   - Ex: fossils of different life forms
   - Ex: pictures of islands or lakes
   - Ex: drawings of atoms or cells
   - Ex: words which label examples or written descriptions of examples of the concept - the words box, watch, bike presented as examples of nouns, or written questions presented as examples of questions.

f. Modeling - demonstrating how it is you want children to proceed.
Ex: Showing and talking through the steps in solving a problem like you want children to.
Ex: Showing and talking through the steps in making an orgami object,
Ex: Showing and talking through the formation of letters in the alphabet.
Ex: Demonstrating and describing how to conduct an interview.

The 6 different ways of providing EXPLANATION can be combined in a number of ways. For instance in teaching the concept of "perimeter" the teacher might define perimeter, present examples of problems wherein it would be necessary to find the perimeter, describe the process for finding the perimeter of a region, and show how to find the perimeter by modeling the process in finding the perimeter of a desk top.

Component 2: QUESTIONING is used by the teacher to check for understanding, to find out how well the information is being assimilated, and what parts of the explanation are or are not being understood. Questions can be distributed to individuals or to groups of children and should be asked throughout the EXPLANATION to keep students involved as well as to get feedback on the effectiveness of the teacher's explanation. Group responses can be monitored by giving the students some kind of non-verbal signal to use for their responses. Codes for Question Types, Load, and Expansion Questions can be used to monitor a teacher's use of questions.

Component 3: R —→ L, RESPONDING TO THE LEARNER IN TERMS OF THE LEARNING. This teacher action occurs when student's have been given an opportunity to interact with the content of the lesson and usually follows a teacher question or direction to students. Madeline Hunter says there are three parts to responding to the learner in terms of the learning.

a. say the student's name
b. clearly accept or reject the student's response
c. repeat the learning

The combination of these three parts corresponds to 5a,b,ci and 6a,b,ci in Targeted Verbal Reinforcement. If a student's answer must be rejected it is important to redirect the child's thinking in a positive direction and as soon as possible to give that same child an opportunity to respond successfully.

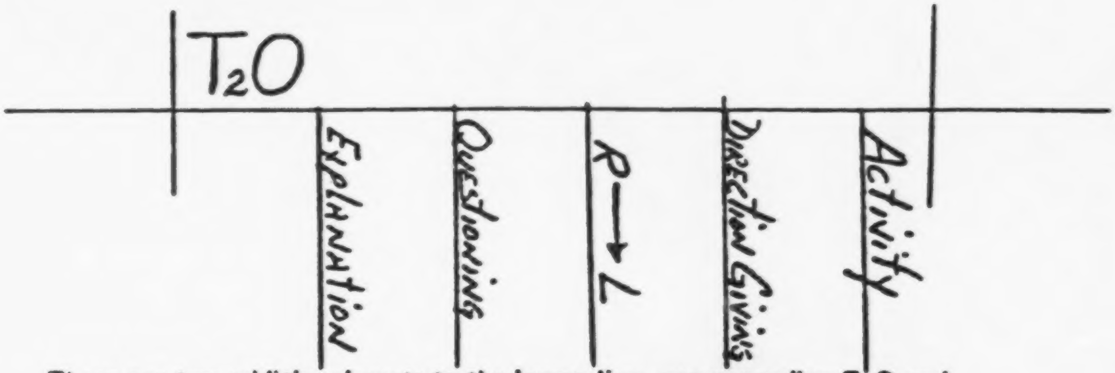
Component 4: DIRECTION GIVING refers to directions the teacher gives to individuals or the group to engage them in interactions with various forms of explanation and activities.

Component 5: ACTIVITY refers to engaging the students in activities so they can organize information, demonstrate their understanding, practice their skills, or express themselves in creative ways. Madeline Hunter desribes activities in two ways in terms of the teacher's involvement.

a. Guided Activities - These activities are carefully monitored by the teacher to insure that students are proceeding in the appropriate manner and to make sure students possess the necessary understandings to proceed on their own.

b. Independent Activities - These activities may be very similar to guided activities or may be challenging activities which have their bases in the explanations given. Independent activities can be done by students without the assistance of the teacher. Independent activities should always be preceded by guided activities.

The five components of T_2O, Teaching to the Objective are EXPLANATION, QUESTIONING, RESPONDING TO THE LEARNER IN TERMS OF THE LEARNING, DIRECTION GIVING, AND ACTIVITY.



There are two additional parts to the lesson line, one preceding T_2O and one following T_2O. These two sets of teacher actions are members of a concept referred to as Maintaining the Focus of the Learner.

Before Teaching to the Objective the teacher builds an ANTICIPATORY SET.

ANTICIPATORY SET refers to what the learner is led to anticipate in the upcoming lesson and has 3 parts. The SET gets the students ready for the EXPLANATION. The three parts of the SET are:

a. Involvement of the learner. Something is done or said by the teacher that "hooks" the learner, that makes the learner say to him/herself, 'I want to find out more about this.'

b. Relate to past, present, and/or future. This refers to something the teacher says to relate the learning which is about to occur to something in the students' past, future, and/or to something else that concerns students in the present.

c. Statement of the objective. This refers to a statement made by the teacher that tells students what they are going to learn.

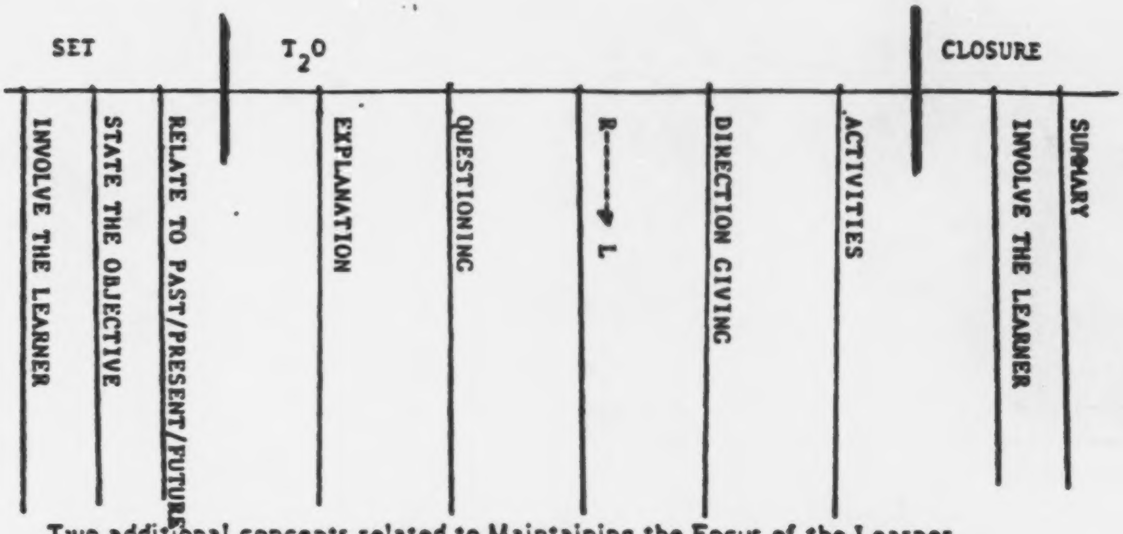
After Teaching to the Objective, the teacher provides CLOSURE.

CLOSURE refers to pulling together what has been learned during the lesson and has 2 parts.

a. Involvement of the learner. The teacher directs or questions the students in ways that get them to summarize the lesson.

b. Summary - recall the main points, concepts, and/or purpose of the lesson. reflect on how what has been learned relates to other learnings possessed by the learners.

The following diagram illustrates all parts of the LESSON LINE.


SET
T_2O
CLOSURE
INVOLVE THE LEARNER
STATE THE OBJECTIVE
RELATE TO PAST/PRESENT/FUTURE
EXPLANATION
QUESTIONING
R → L
DIRECTION GIVING
ACTIVITIES
INVOLVE THE LEARNER
SUMMARY

Two additional concepts related to Maintaining the Focus of the Learner are Overt and Covert Behavior. Overt Behavior refers to the observable behavior exhibited by students that gives the teacher feedback about students' thinking and understanding. Covert Behavior refers to the undisclosed thinking of students. Throughout any given lesson the task of the teacher is to set up an interaction between teaching and learning. To teach for a high degree of learning the teacher sets up conditions for effectively presenting the content of the lesson and for engaging students in overt as well as covert behaviors as they participate in the learning process. Throughout the lesson, beginning with the ANTICIPATORY SET, throughout TEACHING TO THE OBJECTIVE, and continuing through CLOSURE the teacher maintains the focus of the learners by questioning them, by structuring their behavior, and by responding to the learner in terms of the learning.

Course 2

Generic College Teaching Skills

Lesson Plan VII

Objectives:

1. The participants will determine if the faculty member they observed teaching followed the "Lesson Line."

2. The participants will develop a basic knowledge of the Question Sequencing Elements.

Content:

Question Sequencing Elements

a. Distribution
b. Load
c. Wait Time
d. Student Response
e. Teacher Response

(See Handout)

Activities:

Through questions and discussion the participants will determine if the faculty member which they observed followed the "Lesson Line."

Interactive discussion on the Question Sequencing Elements.

Assignment:

Observe a faculty member teaching. Audio Tape the teaching episode. Analyze the questions to determine which and how many students participated and the cognitive level of the questions.

Evaluation:

Participation in the lesson.

QUESTION SEQUENCING ELEMENTS

Distribution

Question Types

- Solitary
- Controlled
- Voluntary
- Spontaneous
- Mass

Action Zones

- Personal
- Social
- Semi-Public
- Public

Load

Taxonomy (Cognitive)

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Taxonomy (Affective)

- Receiving/Attending
- Responding
- Valuing
- Organization
- Characterization

Taxonomy (Psychomotor)

- Reflex Movements
- Basic-Fundamental Movements
- Perceptual Abilities
- Physical Abilities
- Skilled Movements
- Non-Discursive Communication

Wait Time

Self-Fulfilling Prophecy

- Gender
- Ethnic/Racial
- Ability
- Conduct

Student Response

Teacher Response

Targeted Verbal Reinforcement

- Polarity
- Area
- Focus

Expansion

- Active Listening
- Probing Questions
- Clarifying Questions
- Paraphrasing Feedback

(Shepherd/Gallaher)

Course 2

Generic College Teaching Skills

Lesson Plan VIII

Objectives:

1. The participants, through discussion, will indicate (Question Element Sequence) question distribution, load, wait time for the faculty member they observed.

2. The participants will develop basic knowledge of classification and analysis of actual classroom questions.

Content:

Classification and Analysis of Some Actual Classroom Questions

1. Dead end
2. Run on
3. Programmed Answer
4. Put Down
5. Fuzzy
6. Convergent
7. Divergent

(See Handout)

Activities:

Discussion to Accomplish Objective 1.

Interactive process to accomplish Objective 2.

Assignment:

Tape class you teach:
Observe for--Type, Load, Wait time, Participation,
Dead end, Run On, Programmed Answer,
Put Down, Fuzzy, Convergent, Divergent

Evaluation:

Participation in the lesson.

USING QUESTIONS TO ENHANCE CLASSROOM LEARNING

Introduction

Many teachers unwittingly and subtly stymy students' intellectual development and growth of self-confidence by the ways they use and phrase questions. Rather than posing questions which provoke thoughts, evoke expression, encourage discussions, initiate arguments, raise further questions, and enable students to ask without embarrassment about what they do not understand, these teachers use and phrase vague, dead-end, or threatening questions, or suggest their own answers to the questions they pose. Conversely, instructors who have learned the skills of effective questioning are able to teach by their own example how to acquire and classify information, and to think logically. They change students from passive classroom spectators to active, creative participants in the learning process. Through the use of examples, this paper will attempt to help the reader become aware of how questions can subvert or enhance teaching goals.

In Part One, examples of actual classroom questions will be classified and analyzed; in Part Two, the components of an effective type of questioning strategy will be discussed; Part Three will offer some methods for using questions to stimulate thinking and enhance classroom learning.

It is my strong belief that learning is enhanced when the learner does something with the material presented. In this spirit, I have designed tasks throughout this paper to engage each reader and reinforce the ideas under investigation.

PART ONE:
Classification and Analysis of Some Actual Classroom Questions

In a classroom whose climate is characterized by openness, a respect for ideas, and flexibility of teaching methods, students may well respond freely to half-phrased, poorly articulated, fuzzily worded questions. Too, in a class of highly motivated, interested students, ofttimes an instructor need do little else than suggest a topic, or pose a problem. Yet these atypical situations should not blind us to the need for good plans and thoughtful questions in structuring positive learning experiences for all students all the time.Few instructors would quarrel with the statement that questions should provoke thought and evoke expression. (Stevens, 1912). Yet my own analyses of questions taken verbatim from classroom dialogues indicate that many faculty question their students in ways which confuse thinking and suppress responses. Five such types of questions are described here: the "Dead-End" or Yes-No Question; the "Chameleon" Question; the Question with a Programmed Answer; the Put-Down Question; and the Fuzzy Question. Those observing videotaped recordings have picked up the more obvious consequences of each of these question-types: students' facial expressions show puzzlement, annoyance, despair; their hands gesture in confusion; they shrug their shoulders and raise their eyebrows; and they often greet these questions with an almost total lack of verbal response. In

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Napell, S. (1978). Using questions to enhance classroom learning. *Education* 99 (2).

each instance a change of wording and/or pace can result in a radically altered response. These will be suggested as each type is discussed.

THE "DEAD-END" (OR YES-NO) QUESTION

Examples:

a. Does everyone remember Snell's Law?
b. Dr. Trilling told you why they use this angle to design Polaroid sun glasses, right?
c. Does everyone understand what shifts the demand curves and the supply curves around?
d. Do you all see the difference between long-run and short-run costs?
e. Does scale mean anything at all?
f. Now do you see why I substituted the value of 0 in this equation?
g. Do you see how in *this* instance it would be different?

When asked about the intent of these questions, instructors usually respond that they want to make sure that their students do understand these subjects. However, few wait long enough for students to reply; most accept as evidence of general understanding one or two murmured yesses. And, even *were* everyone to respond with a "yes," what would the instructor *really* have found out? If we look over the representative seven "Dead-End" Questions, we can see that a slight change of wording, plus a willingness to wait for an answer would elicit responses telling the instructor more precisely what he[1] wants to know.

For example:

a. Does everyone remember Snell's Law?
a'. What does Snell's Law tell us?

b. Dr. Trilling told you why they use this angle to design Polaroid sun glasses, right?
b'. What did Dr. Trilling suggest was the reason for using this angle to design Polaroid sun glasses?

c. Does everyone understand what shifts the demand curves and the supply curves around?
c'. Let's list (or review) together some of the factors which cause the demand curves and the supply curves to shift.

For your own practice, turn back to the remaining four examples of the "Dead-End" type of question, and ask yourself what it is that the students need to explain. Then, try rephrasing the question to give you this feedback and give them the opportunity to express their understanding of, or problems with, the material.

THE "CHAMELEON" (OR RUN-ON) QUESTION

Examples:

a. What does it mean that he's a Scholastic?. . . Do you remember what Starr said about Scholasticism?. . . What did Chrystal say?. . . Well, who is this Scholastic studying?

---

[1] The reader is asked to accept the conventional use of the pronoun "his" and "him" as a reference to both sexes in order that the distraction of the him/her constructions may be avoided.

b. What abut Thomas Hutchinson?. . . Where is he writing this?. . . How is he writing?. . . Would he be likely to join the mob?. . . How much of an unruly mob is it?
c. Now we have this table, what are we doing?. . . What's the elimination that we need?. . . Last time, didn't we have the returned earnings of the parent and company sales?. . . What's the difference *this* time?
d. What is a demand curve?. . . Where does it come from?. . . Remember, we discussed one thing first: utility. . . What's marginal utility?
e. What kinds of things did they attempt to do?. . . Where did they attack?. . . You mentioned living conditions, what about that?
f. Now, what kind of Physics was going on at that time?. . . Did anyone have any hypothesis then?
g. How does one design a park?. . . Do you walk it?. . . Should it be on the periphery?. . . Should it be within the central city?. . . What examples have we of each?
h. Who sees a community?. . . What's under that tree?. . . Do you see a boundary between grass and litter country?

An examination of this second type of question illumines several of its characteristics. Each "question" although asked virtually in one breath, is in reality a series of questions; the first question of the series is different from the last. The questioner seems unclear about what it is that he is asking since each succeeding question requires a somewhat different answer.

The responses to Chameleon Questions are varied. Most students are often so unsure of what is being asked that they will sit silently to see what will happen; some quickly answer the easiest, the first, or the last question of the group. Some brave soul or those "on the spot" may ask, "What was your question?" or, "Would you mind repeating the question?"

Videotaped replay reveals a typical consequence of this questioning pattern. Hands will go up in response to the first question, a few will go down during the second, and those hands remaining up gradually will get lower and lower as the instructor finally concludes with a question very different from the one for which the hands were initially raised.

There are, in addition, subtle unobservable consequences of Chameleon Questions. Students barraged with many questions, all asked at once, are denied time to reflect and formulate answers. Their thinking does not follow any logical progression but, at best, jumps with the instructor's from topic to topic. They are not encouraged to express their thoughts, but rather discouraged from doing so as the thrust of the question changes so rapidly.

Assimilation of ideas and their orderly expression demand time. Instructors can model logical thinking and orderly expression by making sure that lesson goals are apparent in their questions, preparing questions ahead of time, then pausing to offer students sufficient wait-time[1]. These behaviors encourage students to suggest their own ideas, confront each other's opinions, raise further questions, and become active participants in classroom communication. (Napell, 1975).

To practice avoiding Chameleon Questions, look back at the eight examples listed and figure out how you would ask one clearly stated question. For example:

a. What does it mean that he's a Scholastic?. . . Do you remember what Starr said about Scholasticism?. . . What did Chrystal say?. . . Well, who is this Scholastic studying?

---

[1] "Wait-time" is defined as the amount of time after an initial question has been posed before the teacher answers it himself; repeats, rephrases, or adds further information to the question; or accepts an answer from a student. (Moriber, 1951).

157

a'. Both Professors Starr and Chrystal offered slightly different definitions of Scholasticism. Look over your notes at their definitions, and try to come up with one that will include their main points plus your own understanding of what this term means.

THE QUESTION WITH A PROGRAMMED ANSWER

Examples:

a. "What thoughts have you about impeachment? Do you think the proceedings are too lengthy? That partisan politics play too great a role? Is there enough evidence?"
b. "What role does collective bargaining play in higher education? Do we have any indications as to the effect of collective bargaining on curriculum? Is it going to rigidify it?"
c. "What reasons do you have to use that formula? Was it suggested in the homework chapter? Had you ever used it before? Or seen it used in this context?"
d. "What happens when we add the sums of the rows? Do we get skewed results?"
e. "Look at this shrub and tell me, what observations can you make? Do you see the dead stems? Are they damaged from insect feeding?"

This type of question programs the answer: it not only deprives the respondent from expressing his own thoughts by steering him towards the answers that the questioner expects, but also conveys the message that there is really little interest in what he thinks or says. Those who practice this pattern usually have altruistic justifications (e.g., "Silence after the posing of a question is embarrassing to the student;" "I feel impelled to help out by suggesting clues"), but they need to ask themselves honestly: "Is it I or the student who is uncomfortable after a second or two of silence?"; "Do I have confidence in the students' ability to think about the question and formulate a response?" and, most important, "Am I more interested in what the student has to say or in determining which of *my* answers he prefers?" Programming can be an effective tool in guiding students' thinking, suggesting possibilities, or modeling logical thought processes. However, it is important to be aware of its limiting effect when the goal is to court a wide variety of ideas. If yours is this latter goal, try asking one relatively open-ended question and waiting to hear the students' responses. For example, look back at the first question of this type. It can be changed to a question which allows the student to express his own ideas by asking: "What thoughts have you about impeachment?" and pausing to allow the student to express his own ideas. In this way you indicate your interest in his ideas and model more effective questioning and listening behavior. A willingness to listen helps to create in the classroom a community of learners in place of a super-ordinate-subordinate relationship between teacher and class.

THE PUT-DOWN QUESTION

Examples:

a. OK, Professor Brown went over this twice in lecture yesterday, and I just did it on the board. Any more questions?
b. Who can reword her answer the way you think I would say it?
c. Anybody so confident in his answer that he wants to come up and put it on the board?
d. That was one explanation, yes, but what's another more obvious one?
e. Does anybody know "King Lear" pretty well here?
f. Obviously, it's simply the same Lorentz we've used four times. Any questions?
g. I think the exam problems were pretty straightforward. Any questions?

h. Problem three, was there any question on that? We gave you the solutions, you just differentiated the first one; I don't think there should be any problems on that or the rest. Are there?

Students need to be able to ask questions, for "the questions we ask act like a lens clarifying or distorting information relevant and necessary to us." (Burkhart, 1969). The Put-Down Question is often used as a ruse: the instructor really does not want any further questions. The wording represents a dare to the most brazen, the most hardened, or the most desperate. Thus, instructors subtly dissuade students from asking for necessary clarification. How much more honest to invite those with further questions to meet during office hours . . . or to avoid asking for further questions entirely. Put-Down Questions are often indications of an instructor's ego-needs' taking precedence over his students' learning needs.

THE FUZZY QUESTION

Example:

a. Do you sort of understand what is the principle behind this?
b. Did you notice this business of friendship?
c. How do you suppose one would get such a thing as that?
d. How about plane mirrors?
e. Does everybody feel somewhat like that?
f. The question is, can we prove that? Who got some ideas on that?
g. Does that explain what's going on?
h. Anybody care to explain that in different words?
i. Let's do it for the globular cluster.
j. Is it in all red giants?

An important function of the classroom teaching-learning process is offering students opportunities to use the new vocabulary of the course. As instructors, we can model accurate usage of new terms not only by using them in our own discussion and responses, but also by using them in our questions. Students are better able and more willing to respond to our questions when we state clearly what it is we are asking and simultaneously offer some tools with which they can construct an answer. Compare the following pairs of questions for clarity and the assistance they offer:

a. Do you sort of understand the principle behind this?
a'. How would you describe the principle which accounts for these graph fluctuations?

b. Did you notice this business of friendship?
b'. In the Iliad, Homer often refers to the friendship between men. How would you explain his concept of friendship using the examples he cites?

c. How do you suppose one would get such a thing as that?
c'. Using what we've just learned about alleles, how could you account for the offspring's having these combinations?

DIVERGENT QUESTIONS

The kind of question probably asked least often in the classroom is what has been variously called the *divergent*, the *heuristic*, or the *creative* question. Such a question has no "right" answer. It is an open-ended question, requiring students to use both concrete and abstract thinking to determine for themselves an appropriate response. Students are free to explore the problem in whatever direction they prefer; they are asked to think creatively, to leave the comfortable confines of the known and reach out for the unknown. This is often more uncomfortable for the teacher than it is for the students, since the answers he or she receives cannot be classified as either right or wrong. But this is the fascination and challenge of divergent questioning. The teacher and the students free themselves to explore hypotheses and possibilities.

The following are divergent questions:

1. What might happen to our economy if the gasoline automobile were declared illegal for smog-prevention reasons?
2. If you were stuck on a desert island and the only tool you had was a screwdriver, what uses might you make of it?
3. What might happen if Congress passed a law preventing the manufacture and sale of cigarettes in the United States?
4. How would the story be different if the character had been strong and healthy instead of disabled?
5. How would life in the San Francisco Bay Area be different if the bay were filled in?
6. In what way would history have been changed had the Spanish Armada defeated the English in 1588?

Source unknown

Course 2

Generic College Teaching Skills

Lesson Plan IX

Objectives:

1. The participants, through discussion will indicate (Question Element Sequence) question distribution, load, wait time for a class which they taught and taped.

2. The participants will develop a basic knowledge of reinforcement and corrective feedback.

Content:

See Handout on Corrective Feedback

See Handout on Reinforcements

Activities:

Discussion to Accomplish Objective 1.

Interactive process to accomplish Objective 2.

Assignment:

From tape of class the participants recorded:

Check for corrective feedback to questions.

Check for reinforcements given.

Evaluation:

Participation in discussion to indicate Question Element Sequence.

Participation in the interactive process on corrective feedback and reinforcements.

QUESTION SEQUENCING ELEMENTS

Distribution

Question Types

- Solitary
- Controlled
- Voluntary
- Spontaneous
- Mass

Action Zones

- Personal
- Social
- Semi-Public
- Public

Load

Taxonomy (Cognitive)

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Taxonomy (Affective)

- Receiving/Attending
- Responding
- Valuing
- Organization
- Characterization

Taxonomy (Psychomotor)

- Reflex Movements
- Basic-Fundamental Movements
- Perceptual Abilities
- Physical Abilities
- Skilled Movements
- Non-Discursive Communication

Wait Time

Self-Fulfilling Prophecy

- Gender
- Ethnic/Racial
- Ability
- Conduct

Student Response

Teacher Response

Targeted Verbal Reinforcement

- Polarity
- Area
- Focus

Expansion

- Active Listening
- Probing Questions
- Clarifying Questions
- Paraphrasing Feedback

(Shepherd/Gallaher)

TARGETED VERBAL REINFORCEMENTS

Reinforcements are teacher responses intended to increase (acceptance), decrease (rejection) or extinguish (ignore) individual and/or group actions. A reinforcement may be classified as a "targeted verbal reinforcement' if it contains clarity of: polarity, area, and focus. It should be noted that clarity does not include the codes: 13; u; q.

		Codes
I.	Polarity	
	A. Acceptance--Teacher responses intended to increase the frequency of occurrence.	5
	B. Rejection--Teacher responses intended to decrease the frequency of occurrence.	6
	C. Withhold or Ignore--Teacher responses which neither accept nor reject the occurrence.	13*
II.	Area	
	A. Affective management--Teacher responses which stress the affective content or context of the occurrence.	a
	B. Behavior management--Teacher responses which stress the physical conduct or behavior of the occurrence.	b
	C. Cognitive management--Teacher responses which stress the cognitive content or context of the occurrence.	c
	D. Unidentified management--Teacher responses which do not identify/specify the affective, behavior, and/or cognitive content, conduct and/or context of the occurrence.	u*
III.	Focus	
	A. Group--Teacher responses directed toward group (i.e., "This group is analyzing carefully." "This class is talking too frequently.")	g
	B. Individual--Teacher responses directed toward individual (i.e., "I like the way Tom is synthesizing the problem." "Yes, Mike, your feeling that ... is reasonable." "No, 16 is not correct, Gene." "Bill, sit down.").	i
	C. Questionable--Teacher responses not specifically directed toward either individual or group (i.e., "Those are good ideas." "Sit down." "There is too much talking." "I see good listeners.")	q*

*The presence of codes: 13; u; q indicates that the reinforcement is not targeted.

G. D. Shepherd

FEEDBACK

The value of practice and feedback in improving learning is one of the most consistent findings from teacher effectiveness literature (Brophy and Good, 1986; Rosenshine and Stevens, 1986).

Specific feedback is clear about what was right or wrong in response. Interestingly this characteristic is not always present.

> Mr. Smith: "What kind of relationship must exist if triangles are similar, Jim?"
> Jim: "Their sides have equal lengths."
> Mr. Smith "No, that's not right. Don?"

Mr. Smiths' response told Jim nothing about his answer other than it was wrong. As a result, it did not aid in his understanding of similar triangles, nor did it assist other listening students in a similar state of confusion.

Look at the following example!

> Mr. Smith: "What kind of relationship must exist if triangles are similar, Jim?"
> Jim: "Their sides have equal lengths."
> Mr. Smith: "Not quite Jim. If respective sides of two triangles are equal, the triangles would be congruent. Now, what kind of relationship must they have if they're similar, Jim?"

Feedback that is contingent on performance relates the teacher's response to the student's answer.

> Mrs. Locke: "How does the direction of the ocean current off the coast of Chile affect the rainfall in the Chilean desert?"
> Tim: "Since the current comes from the south, the water is cold The air over the water is then more dense than that over the land, so the air that moves landward is warmed rather than cooled, so it doesn't tend to rain. As a result, a desert is there."
> Mrs. Locke: "Yes, good answer."
> Mrs Locke: "Excellent description of the relationship among ocean currents, density, convection, and rainfall. These cause-and-effect relationships are important to understand the weather. Fine answer, Tim!

Mrs. Locke's first response simply acknowledged the student's response with a statement of general praise. By contrast, Mrs. Locke's second response gave the class in general, and Tim in particular, specific information as to why the answer was a good one. If a pattern of using this type of praise is established, students develop an understanding of the criteria for desirable answers, and, as a result, the general quality of answers over time is increased. In addition, logical connections between ideas are reinforced.

Course 2

Generic College Teaching Skills

Lesson Plan X

Objectives:

1. The participants, through discussion will indicate corrective feedback and reinforcements for a class which they taught and taped.
2. The participants will view and discuss data collected by the faculty member in previously taught classes.

Content:

The participants will be given handouts on:

Questions from Observations

Instructor Responses after Student Response

Student Questioning Sequence

Charts Showing Student Participation

Activities:

Discussion to Accomplish Objective 1

Discussion to Accomplish Objective 2

Evaluation:

Participation in Discussions.

Questions from Observations:

What were we talking about yesterday?

What is the first thing to do in Stating the Problem?

What is the dark red cell layer here?

What are our six topics? --Arlene

Are these cells living or dead?

Establish criteria for what?

What were the two obstacles?

What does studying lead to?

Mike--What is characterization?

What is the green color in these cells?

Somebody give me a scenario as to what is going to happen Thursday?

What does rehersal mean?

What are we looking for in Interpersonal Communication within the group?

What are these cells? (points to the slide)

What are the types of plant propagation?

Instructor responses after student response:

Right
OK
Alright
Yep
Yea
Repeated Answer
Good
Exactly
Yea - the relationship - Patricia
Wrong

En Masse question---Patricia Answers---Yes--The Relationship is----
Patricia

Solitary Question to Bruce---Bruce answers---Right
Repeats Answer
Expands

Solitary Question to Patricia---Patricia Answered----Ok
Directed another question to Patricia---No Answer----
Instructor Answered

En Masse question (Statement of the Problem) --- several students answe

What else? --- Kim ---- Answer ---- Right
How else?----- Jenifer -- Answer --- OK
Last Characteristic? --- En Masse --- Beth Answered --- OK

En Masse Question --- Several Students Give an Answer ----- Yep

Student Questioning Sequence

Student asked question (student mumbles)
   Instructor responded to student

Same student asked question
   Instructor to student

Same student asked question
   Instructor to student

Same student asked question
   Instructor to student

Same student asked question
   Instructor to student

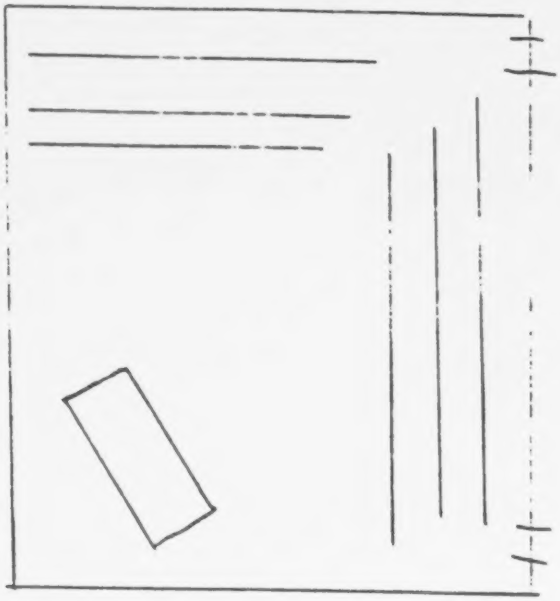
Same student asked question
   Instructor to student

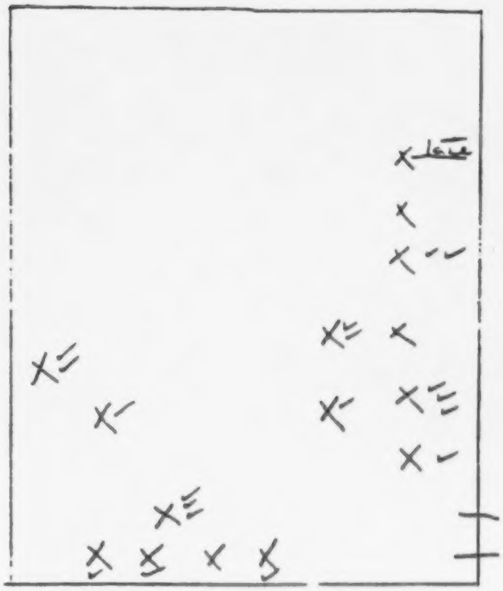
Same student asked question
   Instructor to student

Same student asked question
   Instructor to student

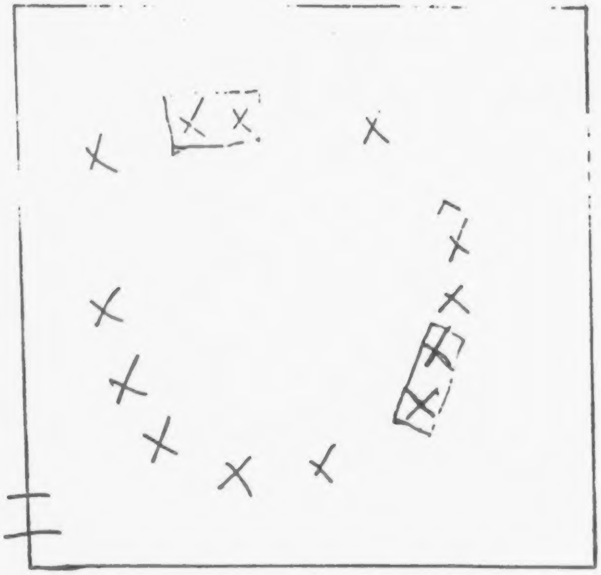
A 3 minute sequence
Information shared between student and instructor only""""""

Student initiates question(student mumbles)
   Instructor repeates question
   Instructor answers question

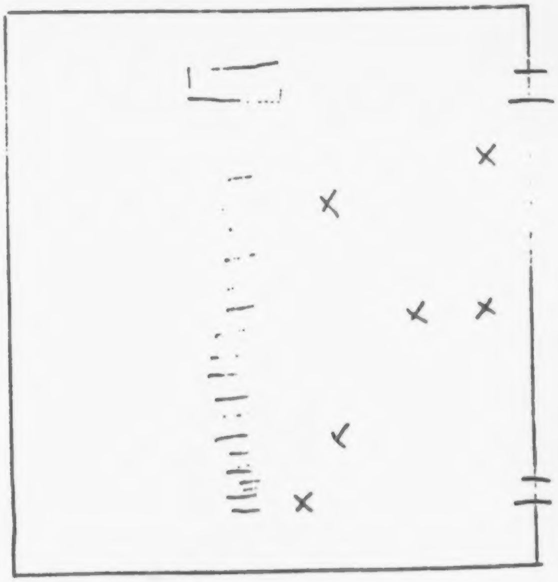




15 Students 9 ♀
11 Participated 6 ♂



7 ♂ 11 W 14 students
7 ♀ 3 B 10 participated



34 students
6 participated

Generic College Teaching Skills

Lesson Plan XI-----Discussion and Role Play Concerning Discussion

Objectives:

The participants will participate in an interactive discussion on the teaching method "Discussion."

The participants will participate in role play activities on incidents concerning "Discussion."

Content:

Video tapes concerning incidents on discussion.

Handout "Using Class Discussion As A Teaching Tool."

Develop participants ability to view tapes and analyze for attributes of the discussion method.

Activities:

Interactive process to discuss the teaching method "Discussion" indicating attributes of the method.

View tapes on incidents concerning discussion and have the participants role play.

Have the participants analyze the role playing situations for attributes of the discussion method.

Evaluation:

Student participation in the discussion.

Student participation in the role playing activities.

USING CLASS DISCUSSION AS A TEACHING TOOL

WHAT IS CLASS DISCUSSION?

Periods of classtime during which the faculty member or a discussion leader guides student discussion of specific course content for learning purposes.

WHY USE IT?

Active participation in good discussion is stimulating, bringing greater ego-involvement in the subject matter through the process. It gives the instructor an opportunity to check student understandings and to note, and sometimes change, their attitudes towards specific content. It can add variety and change-of-pace to the semester.

WHEN TO USE IT?

It is just one teaching tool and therefore need not totally substitute for any other such as lecturing. It is best used after the class has a common knowledge base on a specific area gained through reading and research. It is best for subject matter which involves application, analysis, synthesis, and interpretations of material rather than collections of facts. It is vital to the "Case Method" and many graduate seminars.

HOW DOES THE INSTRUCTOR PREPARE?

In the previous class, talk about student role and preparation. The discussion topic should be roughly outlined and divided into major sub-heads with 3-4 key study questions framed for each section with approximate timing to be used for each section. Students should get this ahead of time.

HOW DO STUDENTS PREPARE?

With common readings, specific research on segments, study of outline given.

HOW TO ARRANGE THE ROOM?

Discussion takes place most effectively when students can be face-to-face, rather than in lecture-style seating. Approximations of a circle provides the best facilitation for participation.

HOW SHOULD THE DISCUSSION BE LED?

Faculty need to understand the neutral-guidance-questioner role of the leader as a facilitator. Care must be taken that lengthy lectures are not given by the faculty member because only brief factual inputs may be needed. Restraint and patience are required rather than domination.

Funk, F. (1987). *Using class discussion as a teaching tool.* Presentation at the Seminar on Teaching, Syracuse University, February.

The leader should:

1. Introduce the topic and its importance, briefly.
2. Mention sub-areas to be covered and timing for each.
3. Give simple ground rules: each should speak up without being called upon, address each other.
4. Get discussion started with a prepared first question: short, stimulating, easy to have an opinion about. *Wait it out*—someone will pick it up.
5. Guide group thinking, impartially and without talking too much yourself, by using questions as your guidance tool to probe, challenge, rephrase their comments. (For question types, see *Chronicle*, 7-25-84)
6. Summarize what has been said periodically then redirect the group to the next topic sub-area with a new question.
7. Be generally accepting; don't constantly make evaluative comments that punish and reward, rather ask examining questions.
8. Encourage general participation by using questions such as: "How do the rest of you feel about this?" or "Are there other reactions?"
9. Keep the discussion "on track". If it seems to be on a tangent, ask the group about the connection to the subject.
10. Listen carefully and ask impromptu probing questions which make the students examine their views carefully, cite evidence for views, examine assumptions, and raise the abstraction level.

HOW SHOULD IT BE ENDED?

1. Allow time at the end for a summary by the leader or the group. Invite the group's agreement on the summary.
2. Give the class a feeling of accomplishment by suggesting that it was a fruitful exchange of important ideas.
3. Suggest next steps or assignment to follow-up.
4. Evaluate results after class for issues ignored or key questions only partially considered.

GENERAL COMMENTS

Good classroom discussion is not a bull-session exchange of ignorance where students just talk in an undirected way and the faculty member just listens. Sloppy thinking, lack of facts or unexamined opinions are not good discussion. On the other hand, a kind of "fishing-game" discussion is also not appropriate. This is where the faculty member conducts discussion (really recitations) until a student stumbles on the "right" or faculty answer.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
" 3: Overly talkative student
" 4: Students whispering in class
" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Generic College Teaching Skills

Lesson Plan XII-----Inquiry and Notes and Notetaking

Objectives:

The participants will participate in activities to develop a basic knowledge and use of the Inquiry Method.

The students will participate in an interactive discussion on the value of notes and the notetaking process.

Content:

The learning cycle will be used to develop the Inquiry Process. This involves the processes of exploration, invention, and expansion. The concept attainment model will be used as a participatory activity to develop this process.

Information on notes and notetaking will be taken from an article on "Notes and Notetaking" from the Teaching Processor.

Activities:

Student will participate in the activity using the "Concept Attainment Model" to develop an understanding of the Inquiry Process.

Student will participate in an interactive process on "Notes and Notetaking."

Assignment:

Read McKeachie--Chapter 30--Student
Ratings of Faculty.

Evaluation:

Participation in the Concept Attainment Activity and the interactive process on notes and notetaking.

methods of discipline, motivation, and evaluation tailored to produce the behaviors desired? Are methods merely tricks, games, and simulations? Is there a method that characterizes the natural behavior of a child when learning?

Answers to such questions are found in the literature and can be observed in the behaviors of practicing teachers. Each teacher assumes, adopts, adapts, and develops something called "method" (see Chapter 4).

Method or methodology is a descriptive term used to label the teacher's procedures, manipulations, and facilitations of content, control, and learning. The fragmentation of methods into the separate compartments of social studies methods, science methods, language arts methods, and so forth, seems to be lessening. The method or methodology of good teaching is now being viewed as a concomitant element of a good learning environment rather than as the functional means of transmitting content. For example, evaluation procedures are similar whether the context of the evaluation is in reading, arithmetic, or behavior.

Thus, the traditional source of methods, the subject being transmitted, is being replaced or supplemented through an analysis of a supportive learning environment.

Premise. Method, or methodology, is a descriptive term used to label those procedures, techniques, manipulations, and facilitations of content and the learning environment which are performed by teachers. A strategy of curriculum instruction must include an element providing for the creation, selection, and evaluation of methodology.

Traditionally, methods have been derived from those content and control-oriented behaviors which we choose to reinforce. Consequently, methods of reading, mathematics, science, social studies, and so forth, were developed along with presentation procedures (for example, lecture, discussion, demonstration, read-recite-test, and drill). To facilitate the reinforcing of behaviors, methods of rewarding, punishing, restricting, and controlling were developed.

Where and what are the sources of methodology? Is it the content and its topics? Is it information transmission and packaging? Or is it the psychology of behavior modification? A strategy must accommodate the source or sources for the development of methodology.

The strategy proposed here will present "inquiry" as the source of methodology. Inquiry is defined as the processes of exploration, invention, and expansion which describe the learner's interactions within a learning environment. The strategy will refer only to inquiry as method. The other performances by teachers upon the learning environment will be referred to as procedures, techniques, manipulations, and facilitations.

The selection of inquiry as the method of the strategy is not done to devalue the supportive procedures, techniques, manipulations, and facilitations employed by the teacher, but rather to provide a framework from which those teacher performances may be created, selected, or adapted. Inquiry provides a normative description of the processes of interaction employed by learners. Teacher performances are then deployed to fit and further stimulate the inquiry processes of exploration, invention, and expansion.

Exploration. The initial phase of inquiry is the process of exploration. When confronted with an environment, a potential learner begins to sort, identify, and label those properties and characteristics of the environment that are familiar. This is not necessarily a random process because the recognition of what is familiar serves as the catalyst for the organization of the learners' behaviors. Learners must do this for themselves. They cannot be told what is familiar to them. Although the environment can be equipped to facilitate the learner's identification of what is familiar, familiarity is ultimately a function of the learner's developmental level and previous experiences.

An understanding of Piaget helps in equipping the learning environments with objects, events, actions, and data which are appropriate to the developmental level of a learner. The appropriate equipping of the environment maximizes opportunities for the learner during exploration to interact with the familiar, thus increasing the likelihood of that particular learning environment's being perceived and processed by the learner. This is crucial, as successful exploration is a prerequisite to a successful learning cycle. Teacher performances (procedures, techniques, manipulations, and facilitations) can then be selected, designed, and adapted to further promote exploration.

The techniques of demonstration, for example, can be employed as a powerful means for furthering exploratory behaviors. When employed during the exploration phase of inquiry, demonstration would be planned around an equipped environment appropriate to the learner's developmental level. The demonstration would display the properties and characteristics of the objects and actions involved in the learning activity, and discussion during the demonstration would identify them. The discussion during the demonstration would emphasize the observation of the "what's" and "how's," rather than the "why's" of the event or situation. The other information presentation procedures (for example, lecture discussion, reading assignments, and media) would be adapted in similar ways during the exploration phase of inquiry. The manipulations and facilitations of individuals into groups, committees, field trips, or other units would also be adapted during exploration to emphasize the observations and interactions of the learner with the equipped environment.

Invention. The second phase of inquiry is the process of invention. Invention occurs as a result of the learner's explorations. Whatever intake the learner has experienced during the exploration is now reorganized. During invention, the learner clusters and groups the inputs of explorations into a description, an explanation, a classification, or a hypothesis. The power of the invention as a stage for additional learning is dependent upon the exploration phase of inquiry. If the stimuli available and the procedures employed during exploration have been appropriate to the learner's developmental level, then the learner's invention(s) will be self-actualizing.

The performances employed by the teacher during the process of invention are designed to emphasize the learner's choosing, displaying, and prizing of personally derived inventions. These performances may also be utilized to clarify the learner's use of inputs from personal exploration. However, teaching procedures of telling and drilling seem inappropriate during invention because learners possess the classifications, descriptions, explanations, and hypotheses which are fundamental to their present and future learnings. Therefore, the manipulations and facilitations of discussing, questioning, displaying, and acting seem more appropriate. Although the technique of lecturing, for example, can be employed to present the teacher's inventions for the learner's exploration, the learner's inventions must be displayed individually; no one else processes them. The teacher performances during invention stress the learner's output behaviors of speaking and writing, rather than the input behaviors of listening and reading.

The potential for future self-directed behaviors of the learner will nest within the inventions. Learners who are not self-directive have probably been blocked from the development of inventions, for exploration behaviors tend to leave the learner with only what is presently familiar. Inventions guide and direct behaviors in both familiar and new environments. The teacher within the modern elementary school provides time, gentleness, and patience to the learner, and facilitates an environment to honor the learner's inventions.

Expansion. The third phase of inquiry is expansion. Expansion occurs as a result of the learner's inventions, and this process begins when the learner's behaviors are directed toward them. Expansion is the testing of an invention's adequacy. Does it work? Will it account for new objects, actions, events, or situations? Expansion serves to strengthen, establish, modify, or destroy inventions, and even if the expansion systems displaces inventions, they serve powerful and useful functions. For example, the behaviors based upon the testing of an incompleted invention foster modification of invention behaviors, which then become more adequate or comprehensive.

Teacher performances employed during expansion are designed to guide the learners to "find out" the strength, logic, and integrity of their inventions. These teaching behaviors act as a catalyst which supplies the learner with the means for verifying an invention. Within the modern elementary school, the teacher serves as a "means for verification," not as an "external verifier" (for example, "That's right," or "That's wrong"). As with exploration, teacher performances may be employed to support both the input and output behaviors of listening, speaking, reading, and writing. The information-presenting techniques are now modified to provide means, examples, and illustrations to test and find out about an invention. Just as with exploration and invention, the behaviors of expansion must be appropriate for the developmental level of the learner. For example, a preoperational learner who cannot mentally reverse an action cannot use reversal as a means for expansion.

Some incomplete inventions will eventually be confirmed through expansion as a function of a learner's developmental level and experiences. When changes occur in either the developmental level or experiences of the learner, each invention contains the seeds of its own modification. Therefore, the comprehensiveness and adequacy of an expansion system and its impact upon an invention should be perceived as a continuum. A concrete operational learner will abandon the invention and expansion systems of the preoperational learner. Be patient! Each successful inquiry cycle increases the readiness for changes in both the developmental level and experiences of the learner.

SITUATION 5.4 Invite several practicing teachers to explain and/or describe some of their methods. Analyze their descriptions in light of the criteria provided in this section and the appropriate sections from Chapter 4.

Coordinating Phases of Inquiry. Successful inquiry will usually include several cycles through the processes of exploration, invention, and expansion. If affective blocks do not occur when an expansion system displaces an invention, the learner will return to exploration, recreate an invention, and reapply an expansion system. Piaget used the term "disequilibrium" for this recycling of an unsupported invention. He further stated that each equilibrium (an affirmed invention) contains the potential seeds for future disequilibrium. In order for recycling and its companion "disequilibrium" to occur, the manipulations and facilitations must be very supportive of the need for affective reinforcement. A more comprehensive discussion of Piaget was given in Chapter 1.

A potential source, then, for the reinforcement procedures of classroom control is the inquiry cycle. As learners are directed through inquiry, the intrinsic energy available for interacting with the learning environment is magnified, thereby reducing somewhat both the energy available and the learner's need to engage in other behaviors. According to the proposed strategy, the reward and punishment systems of a classroom would be judged in terms of its reinforcement of the learners as they experience inquiry (see Fig. 5.4).

Inquiry as an element within the strategy provides a meeting ground for what is presently identified as methods of reading, arithmetic, social studies, and other subjects. The content topics of all these areas of study can be appropriate to inquiry when selected by structure, the first element of the strategy. Therefore, inquiry can be the method which unites the behaviors of learning with the vehicles of content drawn from reading, arithmetic, social studies, and so on. More specific examples of this uniting function of inquiry will be provided in Part II.

Inquiry as an element of the strategy also provides a foundation for the selection of teacher performances. This foundation enables a teacher to answer, for example, the question: "Is the procedure of drill good or bad?" Without a foundation—in this case, inquiry—it has been suggested that the question has no answer. With the foundation of inquiry, drill can be evaluated as a technique useful for establishing at a high efficiency level those inventions affirmed through expansion. Drill is useless during exploration or expansion. Another nonquestion, "Is media good or bad?" has no answer without a foundation (inquiry). Media can be adopted to serve exploration or discovery. The objects, actions, events, and situations of the media are to be appropriate to the behaviors of exploration or expansion. Without additional adaptions, media adapted for exploration would not serve expansion well.

Managing the Learning Environment

The following six elements are viewed by the proposed strategy as central to the management of a learning environment: (1) questions; (2) cues; (3) participation; (4) corrective feedback; (5) reinforcement; and (6) time on task. These six are prime

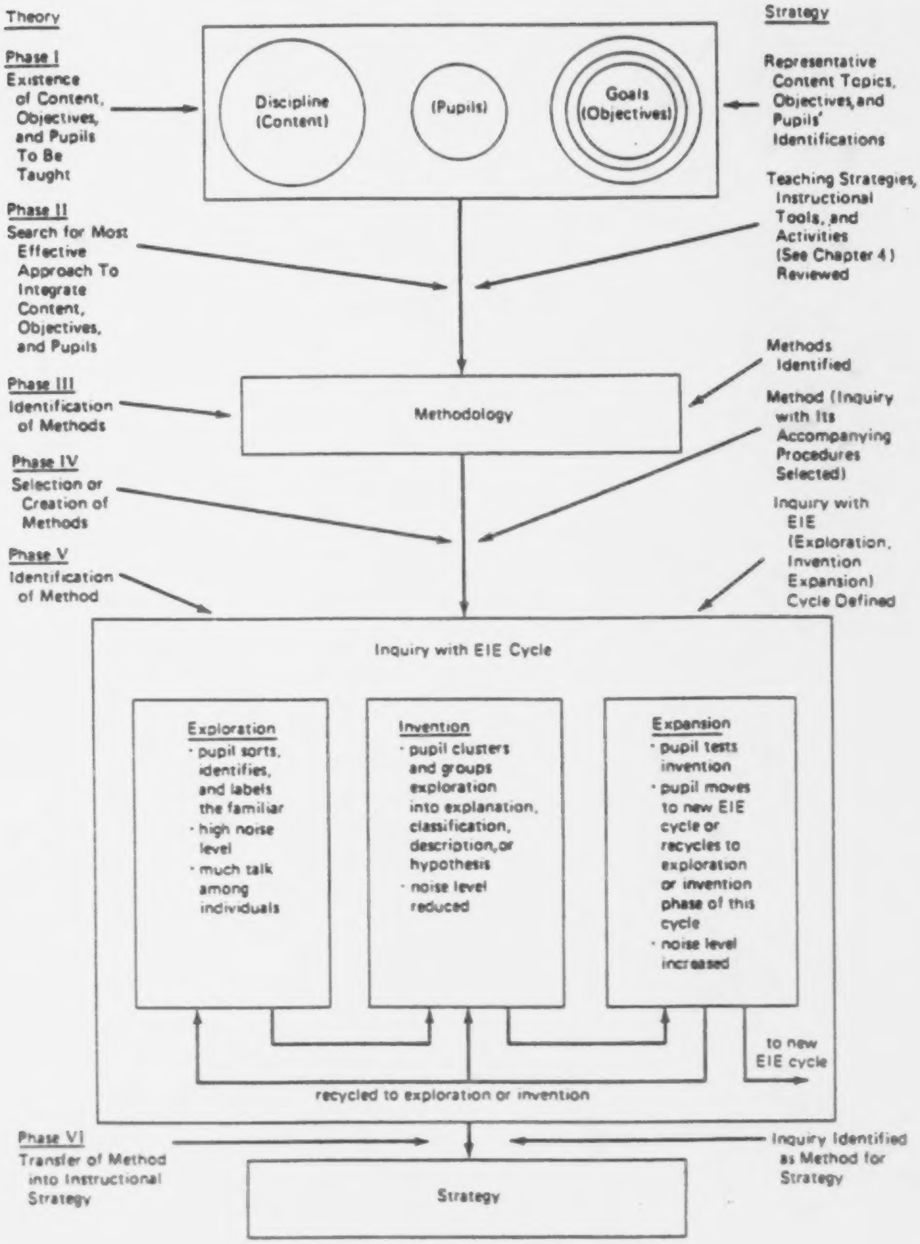

Theory
Phase I
Existence of Content, Objectives, and Pupils To Be Taught
Discipline (Content)
(Pupils)
Goals (Objectives)
Strategy
Representative Content Topics, Objectives, and Pupils' Identifications
Phase II
Search for Most Effective Approach To Integrate Content, Objectives, and Pupils
Teaching Strategies, Instructional Tools, and Activities (See Chapter 4) Reviewed
Methods Identified
Phase III
Identification of Methods
Methodology
Method (Inquiry with Its Accompanying Procedures Selected)
Phase IV
Selection or Creation of Methods
Inquiry with EIE (Exploration, Invention Expansion) Cycle Defined
Phase V
Identification of Method
Inquiry with EIE Cycle
Exploration
· pupil sorts, identifies, and labels the familiar
· high noise level
· much talk among individuals
Invention
· pupil clusters and groups exploration into explanation, classification, description, or hypothesis
· noise level reduced
Expansion
· pupil tests invention
· pupil moves to new EIE cycle or recycles to exploration or invention phase of this cycle
· noise level increased
to new EIE cycle
recycled to exploration or invention
Phase VI
Transfer of Method into Instructional Strategy
Strategy
Inquiry Identified as Method for Strategy

Figure 5.4 The inquiry cycle. (For strategy, see Figure 5.7, p. 194.)

Course 2

Generic College Teaching Skills:

Lesson Plan XIII

Objectives:

The students will participate in an interactive discussion on "Review Sessions."

The participants, through discussion will indicate (Question Element Sequence) question distribution load, wait time and teacher response, and student participation from data which the faculty member collected from a class observed. (That the participants Taught)

The participations will develop an evaluation form to give to the students in the classes they teach.

Content:

Information on "Review Sessions" will be taken from an article on "Exam Review Sessions" from the Teaching Professor.

Handout on data summary from observation of the participants classes.

Handout of University Evaluation Forms.

Activities:

Student will participate in an interactive process on "Exam Review Sessions."

Discussion on Data Summary to accomplish objective 2.

Through an interactive process the participants will develop an evaluation form of questions to illicit information which does not appear on standard evaluation forms from the students in classes which they teach.

Assignment:

Administer the evaluation form to the students in their classes and summarize the information.

Evaluation:

Participation in the interactive process on Exam Review Sessions and the discussion on Data Summary.

Participation and the development of an Evaluation form.

The TEACHING PROFESSOR

Volume 2, Number 11 *November, 1988*

Exam Review Sessions

"Are you going to spend time reviewing for the exam?" students frequently query instructors. Sometimes the question is more blatant: "Are you going over what's going to be on the exam?" Students do not expect to be told what the exam items are, but they're hoping to discover as many details as they can possibly squeeze out of the instructor.

This kind of student pressure causes many faculty members to wonder about the value and purpose of exam review sessions. Should they be incorporated into already-crowded course calendars? Do students perform better on exams if instructors include review sessions? More important, do review sessions contribute to the long-term retention of course content? Do sessions like these help students better cope with exam anxiety? How can the sessions be formatted? What about mechanics – like time, attendance, participation of TAs, and so on?

The case for offering review sessions rests on two principal arguments: The sessions do contribute to the learning potential of exams, and they do help students cope with exam anxiety. In the first case, review sessions help students better learn the content by creating accurate expectations about how knowledge of the content will need to be demonstrated, and how detailed that knowledge needs to be. The sessions can be designed to give students an opportunity to practice the skills needed on the exam.

Helping students cope with exam anxiety is equally important. Some students feel so much anxiety that their performance on the exam suffers. They know the content, they can solve the problems, but the pressure of the situation prevents them from demonstrating that knowledge. Instructors point out that students must learn to cope with anxiety, to perform under pressure, but few can point to jobs in the "real" world that require students to perform under college examination conditions. The process of reviewing under an instructor's guidance, with his encouragement, bolsters students' confidence. Information about exam logistics, like the number and format of the questions, helps them relax and concentrate on content.

As far as empirical evidence is concerned, the effects of review sessions on learning outcomes does not rank as one of the well-researched topics in higher education. However, instructors who monitor student participation in review sessions and scores on exams report a positive correlation between the two.

In fact, one faculty member we know significantly increases attendance at the review session for the second exam by posting on the board the average score of students who attended the first exam review next to the average for those who didn't. He reports the average of those attending has never failed to be higher. He does grudgingly admit that the difference may not result from the review session as much as from student ability (we all know who attends voluntary review sessions), but even so the difference serves to motivate a number of students, and that's his objective.

Ways to Go

As for format, instructors use a variety of them, but consider these three fairly common approaches. The first might be called the open question period. Here the instructor simply makes himself available to the students; they set the agenda. They decide what questions to ask, what problems they'd like solved, or what parts of the reading they want reviewed. If they only ask questions for five minutes, so be it, and the review session ends.

This approach does give students the opportunity to clarify those parts of the content they don't understand. However, it fails to establish content priorities or focus. Frequently this approach lends itself to the 20-questions routine, with students trying to weasel as much information from faculty as possible. The learning potential of the session diminishes to the degree students get into the mode of asking, "Do we have to know *x* for the exam?" "Will there be questions on *x*?" Some instructors still try to provide students an open questioning arena, but focus questions, possibly even recasting some, by having students submit them prior to the review. Discussion of those questions takes precedence over questions students bring to, or that arise during, the review session itself.

Questions Observed in Students Classes:

What does primary do? Lance

Mike, Can you help him?
Rich, Redeem Yourself
Oh!! Rich Wrong Guess

In Eastern U.S., What Vegetative Biome will you find?

Yes

What about center of the U.S.
Yes

Whats responsible for north south trend? Kevin
Yes

Why do we see such a complex vegetation in that area.
(Talking about Cent Am)
Right-Jerry

Anybody Know what Primary sector is? (Spontaneous)

What are two extractors?

Somebody geve me a definition or something about Entrepreneur.
Anybody want to add to that?

Anybody know what bauxite is?
Aluminum Ore

What does the U.S. predominately depend on for Power? (Spontaneous)
Repeated answers

In order to maximize profit -minimize cost, where would an
Orange Juice factory be located---Florida or New York?

Can you think of any other pool of Professionals
Student says--Air Traffic Controllers
How about Pilots?

Students put on scene:

Asked for Critique
Todd Responded
OK Tod very good comment

Laura what do you think?

David What do you think?
Great comment

What are three types of Memory?
Instructor answered the question

What are some implications of Memory?
Student responds--

What are other Implications?
No response

What about other strategies?
Student answers
Thats exactly right

Any other Implications?
Student answers

Have you ever seen Pneumonic Technique?
No response

Any other techniques to improve memory?
No response

Do you remember chunking?

What happens if reherse message--would you remember it better or not?
Student says yes.

What would happen if suppressed fires in grasslands -- Kevin
Right

What happens when suppress fires in Pine area?
Student answers
Uh Huh

Can anybody give me a natural cause of fires in the Ecosystem? Jerry
Student answers

Any other reasons for pattern on N.A. Continent
Student answers
Jerry - right

Who is ruler of Libya?

Is he a terriost?

Ruler of Egypt here two weeks ago?

Where did Bush take him?

80-6-110

STUDENT EVALUATION

1. Did this course fulfill your expectations? ________
Why?

2. Would you recommend that other students take this course?

3. List any distracting mannerisms displayed by your instructor.

4. Comment on the amount of material covered in a single class period.

5. What aspects of this course were most valuable an what were least valuable?

6. Were the major assignments explained adequately?
___Always ____Often ___Sometimes ___Seldom ___Never

~~7.~~ What do you think the policy should be regarding attendance and tardiness for this class?

7, Does the instructor relate the subject matter to students interest and experiences.

8. What additional topics would you like to see included in this course?

Course 2

Generic College Teaching Skills

Lesson Plan XIV

Objectives:

The participants will participate in a discussion to reveal the information gathered from the evaluations which they developed and administered to their students.

The participants will participate in an interactive process concerning "Student Ratings of Faculty" from Chapter 30 of McKeachie.

The participants will evaluate Course 2 (Generic College Teaching Skills).

Content:

Interactive Process on Student Ratings of Faculty:
    Do Student Ratings Measure Teaching Effectiveness?
    What Factors Influence Student Ratings of Teaching?
    Reliability of Student Ratings.

Activities:

Discussion on information gathered from the evaluations which they developed and administered to their students.

Interactive process concerning "Student Ratings of Faculty".

Evaluation of Course 2.

Evaluation:

Participation in Discussion, Interactive Process and evaluation of Course 2.

A Teacher Behavior Inventory
is Completed on Each Student
by the Grant Faculty.

This is returned to the
Student During a Summative
Conference.

TEACHER BEHAVIORS INVENTORY

Instructions

In this inventory you are asked to assess specific classroom behaviors. This information is for the purposes of instructional analysis and improvement. Please try to be both thoughtful and candid in your responses so as to maximize the value of feedback.

Your judgments should reflect that type of teaching you think is best for this particular course. Try to assess each behavior independently rather than letting your overall impression determine each individual rating.

Each section of the inventory begins with a definition of the category of teaching to be assessed in that section. In Scale 1, for each specific teaching behavior, please indicate the observed frequency of occurrence. For Scale II please indicate your judgement concerning the appropriateness of the frequency of occurrence for the observed lesson.

Scale 1
1 = not observed
2 = rarely
3 = sometimes
4 = often
5 = almost always

Scale 2
1 = increase
2 = make no change
3 = decrease

Clarity: method used to explain or clarify concepts and principles	Scale I	Scale II
Provides several examples of each concept	1 2 3 4 5	1 2 3
Uses concrete examples to explain and illustrate concepts and principles	1 2 3 4 5	1 2 3
Fails to define new or unfamiliar terms	1 2 3 4 5	1 2 3
Repeats difficult ideas several times	1 2 3 4 5	1 2 3
Stresses most important points by pausing, speaking slowly, raising voice and so on	1 2 3 4 5	1 2 3
Uses graphs or diagrams to facilitate explanation	1 2 3 4 5	1 2 3
Points out practical applications of concepts	1 2 3 4 5	1 2 3
Answers Students' questions thoroughly	1 2 3 4 5	1 2 3
Suggests ways of memorizing complicated ideas	1 2 3 4 5	1 2 3
Writes key terms on chalkboard or overhead screen	1 2 3 4 5	1 2 3
Explains subject matter in familiar language	1 2 3 4 5	1 2 3
Enthusiasm: use of non-verbal behavior to solicit student attention and interest		
Speaks in dramatic or expressive way	1 2 3 4 5	1 2 3
Moves about while lecturing	1 2 3 4 5	1 2 3
Gestures with hands or arms	1 2 3 4 5	1 2 3
Exhibits facial gestures or expressions	1 2 3 4 5	1 2 3
Avoids eye contact with students	1 2 3 4 5	1 2 3
Walks up aisles beside students	1 2 3 4 5	1 2 3
Gestures with head or body	1 2 3 4 5	1 2 3
Tells jokes or humorous anecdotes	1 2 3 4 5	1 2 3
Reads lecture verbatim from prepared notes or text	1 2 3 4 5	1 2 3
Smiles or laughs while teaching	1 2 3 4 5	1 2 3
Shows distracting mannerisms	1 2 3 4 5	1 2 3
Interaction: techniques used to foster students' class participation		
Encourages students' questions and comments during lectures	1 2 3 4 5	1 2 3
Criticizes students when they make errors	1 2 3 4 5	1 2 3
Praises students for good ideas	1 2 3 4 5	1 2 3
Provides corrective feedback	1 2 3 4 5	1 2 3
Asks questions of individual students	1 2 3 4 5	1 2 3
Asks questions of class as a whole	1 2 3 4 5	1 2 3
Incorporates students' ideas into lecture	1 2 3 4 5	1 2 3

Interaction: (continued)		
Presents challenging, thought-provoking ideas	1 2 3 4 5	1 2 3
Uses a variety of media and activities in class	1 2 3 4 5	1 2 3
Asks rhetorical questions	1 2 3 4 5	1 2 3
Organization: ways of organizing or structuring subject matter		
Uses headings or subheadings to organize lectures	1 2 3 4 5	1 2 3
Puts outline of lecture on chalkboard or overhead screen	1 2 3 4 5	1 2 3
Clearly indicates transition from one topic to the next	1 2 3 4 5	1 2 3
Gives preliminary overview of lecture at beginning of class	1 2 3 4 5	1 2 3
Explains how each topic fits into the course as a whole	1 2 3 4 5	1 2 3
Begins class with a review of topics covered last time	1 2 3 4 5	1 2 3
Periodically summarizes points previously made	1 2 3 4 5	1 2 3
Pacing: rate of information presentation, efficient use of time		
Dwells excessively on obvious points	1 2 3 4 5	1 2 3
Digresses from major theme of lecture	1 2 3 4 5	1 2 3
Covers very little material in class sessions	1 2 3 4 5	1 2 3
Checks if students understand before proceeding to next topic	1 2 3 4 5	1 2 3
Sticks to the point in answering students' questions	1 2 3 4 5	1 2 3
Disclosure: explicitness concerning course requirements and grading criteria		
Advises students as to how to prepare for tests or exams	1 2 3 4 5	1 2 3
Provides sample exam questions	1 2 3 4 5	1 2 3
Tells students exactly what is expected of them on tests, essays or assignments	1 2 3 4 5	1 2 3
States objectives of each lecture	1 2 3 4 5	1 2 3
Reminds students of test dates or assignment deadlines	1 2 3 4 5	1 2 3
States objectives of course as a whole	1 2 3 4 5	1 2 3
Speech: characteristics of voice relevant to classroom teaching		
Stutters, mumbles or slurs words	1 2 3 4 5	1 2 3
Speaks at appropriate volume	1 2 3 4 5	1 2 3
Speaks clearly	1 2 3 4 5	1 2 3
Speaks at appropriate pace	1 2 3 4 5	1 2 3
Says "um", "ah" or other habit words	1 2 3 4 5	1 2 3
Voice lacks proper modulation (speaks in monotone)	1 2 3 4 5	1 2 3
Rapport: quality of interpersonal relations between teacher and students		
Addresses individual students by name	1 2 3 4 5	1 2 3
Announces availability for consultation outside of class	1 2 3 4 5	1 2 3
Offers to help students with problems	1 2 3 4 5	1 2 3
Shows tolerance of other points of view	1 2 3 4 5	1 2 3
Talks with students before or after class	1 2 3 4 5	1 2 3

Course III

Culture of the Academic Enterprise

Course Description:

Culture of the Academic Enterprise is the third of a three course sequence during which the participants will focus on professional principles and practices relevant to professoring in the various content areas. This course will be taught by faculty coordinators who represent the content area of the doctoral candidates.

Goal 1:

This course will contribute to the synthesis of the participants philosophy of teaching, service, and research.

Objective:

The participants, through attendance and participation, will develop within their patterns of thinking philosophies within the areas of teaching, service, and research.

Goal 2:

The participants will develop an understanding of the various processes of the University system.

Objective:

The participants will identify various processes of the university system and develop the distinguishing characteristics of each.

Content Topics:

a. Advising Processes
b. University Organizational Processes
c. Tenure Processes
d. Processes of Academic Freedom
e. Processes of gaining a position in the University
f. Processes of Publishing, Research, and Grantsmanship
g. Professional service processes internal and external to the University.

Goal 3:

The participants will develop an understanding of the various ethical and moral issues within the University setting.

Objectives

1 To define evaluation and to describe each of the four stages in the evaluation process.

2 To select appropriate information-gathering instruments when seeking to make classroom evaluations.

3 To write good test items for evaluating achievement.

4 To develop checklists and rating scales for evaluating student products and performances.

5 To describe how to use information to evaluate—that is, to grade, to judge student progress, to judge changes in student attitudes, and to judge the effectiveness of your own instruction.

Educational evaluation is useful only to the extent that it helps the educator (administrator, teacher, student) make sound educational judgments and decisions. In this chapter you will learn about some of the basic principles of evaluation as applied to classroom problems. This chapter can be very helpful when you are faced with the task of evaluating your students. However, I would encourage you to go beyond this introductory level of understanding. Purchase a good basic text on classroom evaluation techniques. Practice your test-writing skills whenever possible. Learn from your mistakes as you begin to evaluate your own students, and learn to use evaluation as a necessary and important teacher tool. Use evaluation to help you teach better and to help your students learn better.

Objective 1

To define evaluation and to describe each of the four stages in the evaluation process

LEARNING ACTIVITY 1.1

Stated most simply, to evaluate is to place a value upon — to judge. However, forming a judgment is not an independent action. In order to judge, one must have information. The act of judging depends upon this prerequisite act of obtaining information. Furthermore, the act of forming a judgment is itself prerequisite to an action one step further: decision making. So, evaluation, the process of forming judgments, depends upon information gathering and leads to decision making. Picture it this way:

obtaining information → forming judgments → making decisions

Or, this way:

> Evaluation is the process of obtaining information and using it to form judgments which, in turn, are used in decision making.

The above definition clearly specifies the interrelatedness amon the various stages in the evaluation process; and yet, it also clearl indicates the centrality of forming judgments. If you have not formed judgment, you have not evaluated. This chapter, therefore, will dea primarily with the procedures for forming judgments.

However, it is important for you to understand the *total* evaluatio process. So, let's expand this definition some. So far it is obvious th evaluation involves at least three stages: obtaining information, forr ing judgments, and using those judgments in decision making. B adding a preparation stage and enlarging a bit on the last stage, w come up with the following four stages:

The evaluation process

Stage 1: Preparing for evaluation.
Stage 2: Obtaining needed information.
Stage 3: Forming judgments.
Stage 4: Using judgments in making decisions and preparing evaluation reports.

Let's look at a rather typical teaching–learning situation. Noti how this teacher goes through these four stages as she attempts make her instruction more effective.

Stage 1. Preparing for evaluation.

Bonnie, a third grade teacher, has become concerned about Billy. I seems to be having trouble keeping up in reading. Bonnie wonders hc long he will be able to function within the reading group he is in. S wonders whether or not she should move him to a slower group. Perha there is something she can do to help — some extra work, for example, some extra attention. She decides she needs more information before s can accurately judge Billy's level of achievement in reading. After det mining the kind of information she needs (e.g., information about the ki of errors made when reading orally, information concerning Billy's use various word attack skills, information about Billy's interests), Bonı determines when and how to obtain that information.

Stage 2. Obtaining needed information.

Over a period of several days Bonnie obtains a great deal of inforr tion about Billy. She gives him a standardized reading test, listens to h read orally, carefully records the kind of errors he makes, and obser him throughout the day watching for patterns of behavior that mi indicate particular attitudes toward various subject matters.

St[redacted]. Forming judgments.

After analyzing all the information she has obtained, Bonnie comes to the following conclusions:

1. Billy is not capable of reading material written at a third grade level.
2. Billy reads comfortably only that material written on a second grade level or lower.
3. Billy's primary weakness lies in the area of word attack skills.
4. Billy does not have a comprehension problem. He understands what is read to him.
5. Billy likes the children in his reading group.
6. Billy enjoys the stories in the third grade reader.

St[redacted]. Using judgments to make decisions and evaluation reports.

On the basis of the above judgments Bonnie decides that she should keep Billy in his present reading group. She further decides to take the following action:

1. Prepare a check list of word attack skills.
2. Systematically teach Billy those skills on a one-to-one basis.
3. Continue to have the stories read to Billy so that he will not fall behind on his comprehension skills.
4. Have Billy check off each word attack skill as he demonstrates competence in using it.

Having made these decisions, Bonnie writes a brief summary of her judgments, noting the actions she anticipates making. She files this in her own files for future reference. She also calls in Billy's parents and shares her findings with them, asking them to cooperate and to give Billy lots of encouragement and praise, supporting him as he struggles to make up the deficiencies she has discovered.

Note the key features of each of the stages illustrated above:

1. ~~*Stage 1: Preparation:*~~ Determine the kind of information needed and decide how and when to obtain it.
2. ~~*Stage 2: Information Gathering:*~~ Obtain a variety of information as accurately as possible.
3. ~~*Stage 3. Forming Judgments:*~~ Judgments are made by comparing the information to selected criteria.
4. ~~*Stage 4. Decision Making*~~ *and Reporting:* Record significant findings and determine appropriate courses of action.

A NER KEY

Mastery Test, Objective 1

1. Evaluation is the process of obtaining information and forming judgments to be used in decision making.
2. (a) *Preparing for evaluation.* In this stage you need to determine the judgments and decisions you anticipate making (e.g., when to begin Unit 2, what assignments to give, where to place Johnny). Next you must decide what information you will need in order to make those judgments and decisions (e.g., how quickly the students are moving through Unit 1, what the students' interests are, how well Johnny reads). Finally, you will decide when and how to obtain the information needed (e.g., weekly, through quizzes; first week of class, using an interest inventory; second week of class, using a standardized test of reading and observing students during oral reading).
   (b) *Obtaining needed information.* Involves asking students (inquiry), observing students (watching students setting up an experiment), or testing students (giving a multiple-choice test of history facts).
   (c) *Forming judgments.* In this stage you compare the information with some referent and make a value judgment. Grades reflecting achievement and predictions about how well a student might be expected to do are both common examples of classroom judgments.
   (d) *Using judgments in decisions and preparing evaluation reports.* Deciding what action to take (e.g., move Johnny to a slower reading group) and reporting the evaluation results that led to that decision comprise the major tasks of the final stage of evaluation. Note that the emphasis is on the *use* of judgments.

Objective 2

To select appropriate information-gathering instruments when seeking to make classroom evaluations.

LEARNING ACTIVITY 2.1

The first step in preparing to evaluate is determining what you will be evaluating and what kind of information you will need in order to make that evaluation. Once that has been determined, you are ready to choose a tool for obtaining that information. There are basically two steps involved: (1) determine the information-gathering technique you want to use, and (2) select the type of instrument that should be used.

TEP 1

Choose an Appropriate Technique

There are basically four different techniques classroom teachers use to obtain information about themselves and their students: inquiry, observation, analysis, and testing.

To inquire is to ask. Whenever you wish to know someone's opinions, feelings, interests, likes and dislikes, etc., ask that person. Good teachers are always asking their students how they feel about what is going on. They know the value of information gained through inquiry.

Observations are made by teachers whenever they look, listen, feel, or use any other senses to find out what is going on in the classroom. Observations of student performances, habit patterns, and interpersonal interactions all provide the teacher with helpful information.

Analysis is the process of breaking something down into its component parts. For example, a teacher might analyze a math assignment to discover the kinds of errors students are making. Or, a vocational education teacher might analyze a coffee table made by a woodworking student, evaluating the project according to the design, overall construction, and finish of the table.

Testing is being used whenever there is a common situation to hich all students respond (e.g., a test question), a common set of nstructions governing the students' responses, a set of rules for scoring he responses, and a description (usually numerical) of each student's rformance—a score.

The chart below compares these four techniques. Study the chart and then try to do the exercise that follows.

A SUMMARY OF THE MAJOR CHARACTERISTICS OF THE FOUR INFORMATION-GATHERING TECHNIQUES*

	Inquiry	Observation	Analysis	Testing
Kind of information obtainable	Opinions Self-perceptions Subjective judgments Affective (especially attitudes) Social perceptions	Performance or the end products of some performance Affective (especially emotional reactions) Social interaction psychomotor skills Typical behavior	Learning outcomes during the learning process (intermediate goals) Cognitive and psychomotor skills Some affective outcomes	Attitude and achievement Terminal goals Cognitive outcomes Maximum performance
Objectivity	Least objective Highly subject to bias and error	Subjective but can be objective if care is taken in the construction and use of the instruments	Objective but not stable over time	Most objective and reliable
Cost	Inexpensive but can be time-consuming	Inexpensive but very time-consuming	Fairly inexpensive Preparation time is somewhat lengthy but crucial	Most expensive but most information gained per unit of time

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* Terry D. TenBrink, *Evaluation: A Practical Guide for Teachers* (New York: McGraw-Hill, 1974), p. 140. © 1974 by McGraw-Hill Book Co. Used with the permission of the McGraw-Hill Book Company.

Your Turn

CHOOSING AN EVALUATION TECHNIQUE

For each of the following questions, decide on the evaluation technique that would probably be most helpful. Use the following key: A, inquiry; B, observation; C, analysis; D, testing.

1. What kind of errors does Sally make when reading aloud?
2. How well can Sammy read?
3. What is George's attitude toward math?
4. Why isn't Ernest completing his workbook during spelling?
5. What is the average reading level of this class?
6. Who does Johnny have as friends?
7. What mistakes are most common in long division problems?
8. How well did the students learn the concepts in Chapter 7?
9. How well does Mary interact with her classmates during recess?
10. What are Kevin's primary handwriting errors?

ANSWER KEY

Your Turn: Choosing an Evaluation Technique

1. B 2. D or B 3. A 4. B or A 5. D 6. A or B 7. C 8. D 9. B 10. C or A

STEP 2

Select the Best Instrument to Obtain the Kind of Information You Need

Once you have selected an appropriate information-gathering technique, you should choose the type of information-gathering instrument to be used. An information-gathering technique is a *procedure* for obtaining information. An information-gathering instrument is a *tool* we use to help us gather information. We will briefly examine four basic types of instruments: tests, checklists, rating scales, and questionnaires.

A test is an instrument that presents a common situation to which all students respond, a common set of instructions, and a common set of rules for scanning the students' responses. Tests are used primarily for determining aptitude and achievement. When we want to know how much a student knows or how well he or she can perform certain skills, a test is an appropriate instrument to use.

Most classroom tests are constructed by the teacher and are referred to as "teacher-made tests" or "classroom tests" to distinguish them from standardized tests. The instructions on standardized tests have been carefully standardized so that everyone taking the test does so under similar conditions. Most standardized tests are developed and sold by test publishers and have been carefully developed, tried out, revised, standardized, and evaluated for reliability and validity.

A checklist is basically a list of criteria (or "things to look for") for evaluating some performance or end product. One uses a checklist by simply checking off those criteria that are met. For example, one could use a checklist to be certain that a student goes through all the routines in an exercise program. Or, a list of criteria for a good speech could be checked as an indication of what a speech student did correctly when making a speech to inform. Whenever it is helpful to know whether an important characteristic is present in a performance (or is found in some end product), a checklist would be an appropriate instrument to use.

If we wish to rate the quality of a performance or end product, a rating scale would be the instrument to use. We might judge a speech, for example, by whether or not gestures were used. But if we want to determine the quality of those gestures (whether they were good, fair, poor, etc.), a rating scale should be used. A rating scale provides a scale of values that describe someone or something being evaluated.

The advantages and disadvantages of each type of instrument are highlighted for you in the following table. Again, study the table carefully and then take "your turn" at trying to select an appropriate instrument.

ADVANTAGES AND DISADVANTAGES OF EACH TYPE OF INFORMATION-GATHERING INSTRUMENT

Type of Instrument	*Advantage*	*Disadvantage*
Standardized tests: used when very accurate information is needed	Usually well developed and reliable. Include norms for comparing the performance of a class or an individual.	Often not measuring exactly what had been taught. Expensive. Limited in what is measured.
Teacher-made tests: used routinely as a way to obtain achievement information	Usually measure exactly what has been taught. Inexpensive. Can be constructed as need arises.	No norms beyond the class are available. Often unreliable. Require quite a bit of time to construct.
Checklists: used to focus observations	Helpful in keeping observations focused on key points or critical behaviors.	Measure only presence or absence of a trait or behavior.
Rating scales: used to judge quality of performance	Allow observational data to be used in making quality judgments as well as quantitative judgments.	Take time and effort to construct. Can be clumsy to use if too complex.
Questionnaires: used to inquire about feelings, opinions, and interests.	Keep inquiry focused and helps teacher to obtain the same information from each student.	Take time and effort to construct. Difficult to score — no right answers and therefore hard to summarize the data.

Your Turn

SELECTING AN INFORMATION-GATHERING INSTRUMENT

Read each of the following classroom situations. First decide what technique is being used (inquiry, observation, analysis, testing), and then write down which instrument you would use and why. Compare your answers with those of your peers and those found in the answer key.

1. A second grade teacher wants to find out if her pupils now understand how to form the vowels in cursive writing.
2. A high school social studies teacher wants to know how his students feel about the outcome of the latest elections.
3. A fourth grade teacher wants to know how well his class compares to other fourth grade classes in their achievement of the basics: reading, writing, arithmetic.
4. An eighth grade teacher just finished teaching her students to compute the volume of a cube and wants to know how well her students learned this skill.
5. A music teacher wants to rank-order her clarinet players so that she can assign them chairs in the band.
6. A shop teacher wants to make sure that his students all follow the safety precautions when operating a radial arm saw.

c. inquiry—checklist
d. inquiry—test

6. To determine academic aptitude for placement in special programs, one should use a:
   a. rating scale
   b. checklist
   c. classroom test
   d. standardized test

ANSWER KEY

Mastery Test, Objective 2

1. d 2. a 3. c 4. b 5. a 6. d

Objective 3

To write good test items for evaluating achievement.

LEARNING ACTIVITY 3.1

The first step in test construction is to determine what it is you are trying to test and what kind of item would be best suited to testing that type of information. ~~Most classroom tests are used to measure learning outcomes. The best statements of learning outcomes are instructional objectives.~~ As you may recall from the discussion in Chapter 3, instructional objectives define clearly, in observable terms, the achievement we expect of our students. In that chapter the importance of well-chosen verbs in writing instructional objectives was emphasized. The verb should describe precisely the kind of response you expect the student to make to a particular subject matter content. If the verb used in an instructional objective does do that, it is a relatively simple matter to determine the type of test item you should use. For example, suppose that you are trying to find out if your students have mastered the following objectives:

1. To list the names of the first ten presidents of the United States.
2. To describe the major contributions of Washington and Lincoln.
3. To explain the changes that occur when a different political party takes control of Congress.

The first objective obviously calls for a short-answer-type question in which the student is asked to list names. The other two objectives would best be tested with an essay question because the student would have to describe or explain—not the kind of thing they could do on an objective test such as true/false or multiple choice. What kinds of learning outcomes are best measured with objective-test items (true/false, matching, multiple choice)? These types of items are best suited for measuring learning outcomes for which the student must be able to choose among alternatives. For example:

1. To choose the word that best describes the author's feelings.
2. To select the sentence that best represents the democratic position.
3. To identify the emotive language in a paragraph.
4. To determine which of several experiments would most likely provide the information needed by a particular researcher.

Note that each of these objectives could readily be measured with an objective test. However, it is possible to measure some of them with some other type of item. For example, the third objective in the list above (to identify emotive language) could be measured with a variety of test items:

1. *True/false:* The statement underlined in the paragraph above is emotive language.
2. *Multiple choice:* Which of the following sentences (as numbered in the paragraph above) represents emotive language?
   (a) Sentence 2 (c) Sentence 6
   (b) Sentence 3 (d) Sentence 9
3. *Short answer:* Pick out three emotive statements from the paragraph above and write them on your paper.

You can readily see that the first step in selecting the type of item to use is to examine the instructional objectives. However, there is often still room for choice; some objectives can be measured by more than one item type. Consequently, other things must be taken into account. The following table highlights the advantages and disadvantages of the major types of test items. Study this table carefully and then try the exercise "Your Turn."

ADVANTAGES AND DISADVANTAGES OF DIFFERENT TYPES OF TEST ITEMS

Type	Advantages	Disadvantages
Short Answer ✓	Can test many facts in short time. Fairly easy to score. Excellent format for math. Tests recall.	Difficult to measure complex learning. Often ambiguous.
Essay ✓	Can test complex learning. Can evaluate thinking process and creativity.	Difficult to score objectively. Uses a great deal of testing time. Subjective.
True/False ✓	Test the most facts in shortest time. Easy to score. Tests recognition.Objective.	Difficult to measure complex learning. Difficult to write reliable items. Subject to guessing.
Matching ✓	Excellent for testing associations and recognition of facts. Although terse, can test complex learning (especially concepts). Objective.	Difficult to write good items. Subject to process of elimination.
Multiple Choice ✓	Can evaluate learning at all levels of complexity. Can be highly reliable, objective. Tests fairly large knowledge base in short time. Easy to score.	Difficult to write. Somewhat subject to guessing.

Lesson Plan XII
Course Design Decisions

Objectives:

The participants will be able to describe techniques for evaluation through the process of observation.

The participants will be able to write (acceptable) test items.

The participants will be able to write objective test items at the various class levels of the cognitive domain of the Taxonomy of Educational Objectives.

Content

Observation
    Material from classroom teaching skills

    Ways to evaluate performance
    Types of instruments
        check list
        constructing to meet needs
    Establishing criteria and converting to a score

    Writing test items
        Bloom's taxonomy - Handout used

Activities:

Lecture (interactive process) for observation

Writing test items:

put students in groups
Give handout to students and have them construct questions at the various levels ... The hand contains a paragraph on which the students are to base their questions.

Whole group
Have students volunteer to give questions they have constructed. Then construct in various forms of items such as fill in the blank, true and false and multiple choice.

Evaluation:

Construction of questions on the various levels of Bloom's taxonomy.

Assignment:

Complete construction of test items on the various levels of Blooms Taxonomy.

Construct one question relevant to the following paragraph at each level of the cognitive domain.

In Des Moines, Iowa, two high school students and a junior high student, in defiance of a ban by school authorities, wore black armbands to class as a protest against the Vietnam War. As a result, they were suspended from school. But the U.S. Supreme Court later ruled the suspensions were illegal, holding that the first amendment to the Constitution protects the rights of public school children to express their political and social views during school hours.

* * *

This case illustrates a significant new trend in American life. Young people, particularly those under 21, are demanding that they be granted rights long denied them as a matter of course. And, with increasing frequency, they are winning those rights.

1. Knowledge

2. Comprehension

3. Application

4. Analysis

5. Synthesis

6. Evaluation

3. Application level questions

4. Analysis level questions

5. Synthesis level questions

6. Evaluation level questions

ANSWER KEY

Your Turn: Constructing Questions on the Six Levels of Bloom's *Taxonomy*

Here are some questions on the six levels of the *Taxonomy* that you might have asked about the paragraphs. They are not the *only* questions that could have been asked but are simply meant to provide examples.

1. *Knowledge level questions*
   1. What action did the three students in Des Moines, Iowa, take that caused their suspension?
   2. What was the ruling of the Supreme Court on their case?
   3. What part of the Constitution did the Supreme Court refer to as a basis for its decision?
2. *Comprehension level questions*
   1. What is the main idea in this paragraph?
   2. In your own words, explain why the Supreme Court declared the suspensions illegal.

3. *Application level questions*
   1. Considering the ruling in the Des Moines case, what would the legal ruling be on a student who, despite a ban by school authorities, wore a yellow cloth star sewn on her jacket as a protest against the United Nations policy toward Israel?
   2. Considering the Supreme Court ruling in the Des Moines case, what do you think the legal ruling would be on a group of students who blockaded the entrance to a classroom as a protest against race discrimination?
4. *Analysis level questions*
   1. Why did the Supreme Court support the rights of students to express their political and social beliefs during school hours?
   2. What evidence, other than the specific case described in this paragraph, can you cite to support the conclusion that young people are now gaining long denied rights?
5. *Synthesis level questions*
   1. Develop a short story that portrays a young person seeking to attain a legal right denied to those under 21.
   2. If children gained the full legal rights enjoyed by adults in America, what implications would it have for family life?
6. *Evaluation level questions*
   1. What is your opinion on the issue of minors enjoying the full legal rights of adults?
   2. If you had been a judge on the Court in the case of the Des Moines students who protested the Vietnam War with black armbands despite a school ban, how would you have ruled?

LEARNING ACTIVITY 2.2

If you feel that you need further practice in constructing questions or if you would like to improve your question construction skills, Learning Activity 2.2 provides that opportunity. This learning activity involves another way of playing the Question Master Game. All you need do is make one rule change. Instead of using the "Classification Cards" that have already been developed, you must construct a question of your own whenever you land on a square marked with a "C." The question must be at the same level of the *Taxonomy* as the number of spaces you move. Avoid using the same question more than once, and try to vary your question stems.

Example

The die (or cards or spinner) indicates "6," and you move your piece six spaces. If you land on a "C" space, you must construct a question at level six of the *Taxonomy* (Evaluation). If you fail to do this, you must go back three spaces from your original space. If you are successful, you can remain on that space until your next turn.

The "C" spaces now represent *Construct* a question rather than *Classify* a question. All other rules remain the same. Any missed questions result in going backward three spaces.

If the die shows:	*Question must be at:*
1	Knowledge
2	Comprehension
3	Application

Lesson Plan XIII
Course Design Decisions

Objectives:

The participants should be able to construct questions using the various classification levels in the Cognitive Domain of Bloom's Taxonomy. (for evaluating achievement)

The participants should be able to describe how to use information to evaluate students.

The participants should be able to state opinions on articles from the "The National College Newspaper" dealing with grading.

Content:

Writing questions on Bloom's Taxonomic Levels
    Covering - Comprehension, Application, Analysis, Synthesis and Evaluation

Grading

Grading as a type of judgement
    Classroom teaching skills - Cooper 392-394
Judging student progress
    Classroom Teaching Skills - Cooper 394-395

Assigning Test Grades
    Benefit of test and score to student
    Benefit of test and score to instructor
        McKeachie -- 104-105

Assigning Course Grades
    Curving
    Scaling
    University Grading Scales
        McKeachie -- 115-117

Evaluating Changes in Attitude
    Classroom Teaching Skills - Cooper 395-396

News paper articles

From the National College Newspaper - April 1988

"A - F" Grading System Flunk Student's Evaluation

Biology Prof Guarantees "C" or Better

Activities:

Participants will write questions on chalk board (in objective form) using the various levels of Bloom's Taxonomy.
Defend --

Interactive Discussion on Grading

Evaluation:

Construction of question using various levels of Bloom's Taxonomy (for evaluating achievement)

Participation in discussion of Newspaper articles.

Assignment:

Part V in McKeachie -- Teaching Tips
Includes Chapters 19, 20, and 22.

3–6. For each of the following situations, determine the kind of judgment being made. Use the following key: A, norm-referenced; B, criterion-referenced; C, self-referenced.

______ 3. A third grade teacher discovers that her class scored above the national average on a math achievement test.

______ 4. A high school biology teacher selected his best students to help him set up the experiments for the next day.

______ 5. Mitsy's teacher was really pleased because of her progress in reading. Her gains since last year are obvious.

______ 6. Four of the students who took the algebra aptitude test failed to get a high enough score, and they were not allowed to take beginning algebra.

ANSWER KEY

Your Turn: Types of Judgments

1. B 2. C 3. A 4. A 5. C 6. B

TYPES OF JUDGMENTS

Grading

Assigning grades has forever been ~~a task teachers dislike. There seems to be no "fair" way to do it, and any grading system used seems to be subject to all kinds of interpretation problems~~. The next few paragraphs will not resolve the problems of grading, but they should help you to better understand the alternatives available to you.

One of the most common questions teachers get from students concerning grading policy ~~is: "Are you going to grade on the curve?" Whether grades are fitted to a normal curve or just "curved" to~~ make a reasonable distribution, the basic idea behind grading "on a curve" is the same: making norm-referenced judgments, a very common form of assigning grades. The class as a whole is used as a norm group, and the class average usually serves as the referent against which all other grades are judged. Usually the average score is assigned a grade of "C," and some proportion of scores on either side of that average are also assigned grades of "C" (the "C" range usually includes 30 percent to 50 percent of the class). After that, grades are assigned by selecting some cut-off points so that a certain (usually smaller) percentage of students fall into the "B" and "D" ranges, respectively. Finally, those left fall into the "A" and "F" ranges, respectively, as their scores deviate above or below "C."

What do you think are the advantages and disadvantages of this form of grading? List them below and then compare your answers later on with the information in the table on page 398.

Advantages	*Disadvantages*
______	______
______	______

Remember that whenever you grade someone's work by comparing it to someone else's (or to the average of some group), you are basically using a norm-referenced approach, and all the disadvantages of that type of approach apply.

Another way to assign grades is to establish certain cut-off points for each grade. These cut-off points serve as criteria against which a given student's performance is judged. A common way in which this approach is used is for a teacher to assign points for every assignment and every test. Next, the teacher determines how many total points a student must get in order to get an "A," how many to get a "B," etc. Each assignment or test can be graded that way, and the total number of points for the marking period can be added together and compared to cut-off totals in the same way to assign report card grades. This could be called criterion-referenced grading. However, true criterion-referenced evaluation is a bit more complex than what we have just described because the cut-off scores should be determined on the basis of some meaningful external criterion.

What do you think are the advantages and disadvantages of this kind of criterion-referenced grading?

Advantages	*Disadvantages*

Teachers often find themselves wanting to give a student a good grade for having made so much improvement. Grading on the basis of improvement is a popular kind of self-referenced grading. Comparing a student to himself or herself is a desirable, humane way to grade. However, this kind of grading has many disadvantages. Can you think of some of them? After writing down your ideas, study the following table.

Advantages	*Disadvantages*

ADVANTAGES AND DISADVANTAGES OF DIFFERENT TYPES OF GRADING

Type of Grading	Advantages	Disadvantages
Norm-referenced	1. Allows for comparisons among students 2. Classes can be compared to other classes 3. Allows teacher to spot students who are dropping behind the class	1. If whole class does well, some students still get poor grades 2. If class as a whole does poorly, a good grade could be misleading 3. Does not allow individual progress or individual circumstances to be considered 4. The whole class (or large portions of it) must be evaluated in the same way 5. Everyone in class (or norm group) must be evaluated with the same instrument under the same conditions
Criterion-referenced	1. Helps teacher to decide if students are ready to move on 2. Criteria are independent of group performance 3. Works well in a mastery-learning setting 4. Each individual can be evaluated on different material, depending on his or her level of achievement	1. It is difficult to develop meaningful criteria (therefore arbitrary cut-off scores are often used) 2. Presents unique problems in computing the reliability of criterion-referenced tests 3. Makes it difficult to make comparisons among students
Self-referenced	1. Allows you to check student progress 2. Makes it possible to compare achievement across different subjects for the same individual	1. All measures taken on an individual must be taken with similar instruments under similar circumstances 2. Does not help you to compare an individual with his or her peers

Judging Student Progress

Teachers have an ongoing concern about the amount of progress their students are making. If students are making a reasonable amount of progress, the methods, materials, etc., are probably working. If no progress or too little progress is being made, some changes may need to be made somewhere in the instructional program.

A judgment of student progress is, of course, a self-referenced judgment, and thus all the disadvantages of that type of judgment will hold. It is especially important that progress in achievement be measured the same way each time progress is checked. For example, suppose that you were trying to check a student's progress in reading. It would be best if you could use the same type of test each time progress was checked (alternate forms of the same standardized tests; observations of oral reading, using the same type of checklist or rating scale, etc.).

The following suggestions should help you do a good job of evaluating student progress. Study them carefully and then discuss with your classmates ways in which these suggestions could be carried out at various grade levels for different subject matters.

Suggestions for Evaluating Student Progress

1. Determine ahead of time what student characteristics or skills you are going to keep track of (don't suddenly ask, half way through the semester, "Has any progress been made?").

2. Establish a baseline (achievement level, behavior patterns, etc.) early in the semester.
3. Choose and/or develop instruments (tests, rating scales, etc.) in advance that you can use throughout a student's progress.
4. Describe the changes you expect will occur as your students progress. This description will help you focus your evaluation on appropriate behaviors and achievements.
5. Obtain information often enough so that you can see any progression that might be occurring and so that a single bad sample of information won't throw your evaluation off.

Evaluating Changes in Attitude

Most psychologists would define an attitude as a predisposition to act in a negative or positive way toward some object or person. Note that the attitude is a *predisposition*, which is not observable or measurable. However, it is a predisposition to *act*, and that *is* observable. This means, then, that in order to measure attitudes, one must focus on the actions or behaviors of students. Of course, the difficult part is discerning what any given action or pattern of actions means (i.e., what the attitude is that is producing the actions).

Usually, a teacher becomes concerned about attitude change when he or she discovers that one or more students have a bad attitude. Common among these are bad attitudes toward a given subject matter, a negative attitude toward the teacher, or feelings of prejudice toward minority students in the class. The important thing to remember when you first become aware of a bad attitude is that there must have been some behaviors that led you to discover that attitude. The student(s) must have said some things (speech is an observable behavior), done some things, or refused to do some things that made you aware of the attitude. Your first step, therefore, is to try to determine what specific behaviors led you to believe that there was an attitude that needed changing.

Once you have determined the behaviors associated with an attitude you think should change, your next step is to systematically obtain information about the frequency of occurrence of those behaviors. These data will serve as the baseline (the referent) against which you will judge any future changes in attitude.

When you are sure that the behaviors you observed are frequent and do indeed represent an inappropriate attitude, you are ready to set down a plan for observing any possible changes in attitude (as they would be reflected in changes in behaviors). There are two very important things to consider at this point. First, be certain that you make frequent observations so that you can feel confident that the behavior you are observing is representative and not isolated. Second, look for the behaviors when the student is in the presence of or thinking about the object of his or her inappropriate attitude (e.g., look for cutting-up behaviors during math if the student dislikes math).

Finally, when the information is obtained, you must judge whether or not the attitude has changed. Remember the disadvantages of making self-referenced judgments. Differences between any two sets of observations may not mean too much. However, if you find over a period of time (and attitudes usually take considerable time to change) that the undesirable behaviors are decreasing and the desirable ones increasing, an attitude change is probably occurring.

You may find it very helpful to use a rating scale to help you summarize the data from your observations. Suppose, for example, that you were trying to see if a student's attitude toward math were improving. You might develop a rating scale that would look something like this:

Hates math		*Tolerates math*		*Loves math*
1	*2*	*3*	*4*	*5*
Complains about math; puts off doing assignments; turns in sloppy math papers		Says, "Don't care about math grade"; does assignment but delays same; never chooses math over other subjects		Says, "I like math"; gets right at assignments; does extra-credit work; chooses math over other subjects

Note that the behaviors characteristic of different attitudes have been placed under the two end points and the midpoint of the scale. Each time we observed our student react to math, we could determine which set of behaviors his or her actions were most like and mark an "X" on the scale accordingly. Several scales marked each in turn over a semester would give us a picture of any progress the student was making.

In summary, the basic steps involved in evaluating a student's change in attitude are as follows:

1. Determine the behaviors associated with the attitude you think should change.
2. Systematically obtain information about the frequency of occurrence of these attitudes.
3. Decide if the behaviors occur frequently enough and consistently enough to represent an inappropriate attitude.
4. Set down a plan for observing any possible changes in attitude over time.
5. Decide whether the attitude has changed by comparing the information obtained at two or more different times.
6. Record your findings—possibly using a rating scale.

Evaluating Instruction

Most teachers have a real desire to know whether or not their instruction is effective. They also fear that they, or their principal, will find out that it is not effective. Principals, fellow teachers, students, and parents are all going to be judging the quality of instruction. Therefore it is advantageous for the teacher to have well-documented evidence of his or her teaching effectiveness.

Of course, besides accountability, teachers are concerned about improvement. They are always wanting information to help them upgrade their courses. So let's explore briefly some of the options available to teachers who wish to evaluate their own teaching. The information provided here will help you start thinking about evaluating instruction, but it in no way pretends to make you an excellent evaluator. Several books on program evaluation are cited in the references at the end of this chapter. Later, you may have an opportunity to enroll in a program-evaluation course. In the meantime, here are a few basic suggestions.

There are two primary considerations in evaluating your own instruction. First, you must determine the kind of information you will obtain about the effectiveness of your instruction. Second, you must determine an appropriate referent for judging the effectiveness of your instruction.

There are at least three kinds of information that can be used to determine the effectiveness of your instruction. The first is information about your own behaviors as a teacher. If you feel, for example, that good instruction occurs when teachers do certain things (e.g., provide behavioral objectives for their students, interact a great deal with their students, or ask certain types of questions during instruction), obtaining information about whether or not you do these things is a place to begin in the evaluation of your teaching. Many teacher-effectiveness rating scales do focus on such teacher behaviors. Although this kind of information can be helpful to you as you check your own progress as a teacher, it may be misleading about the *effectiveness* of instruction. A teacher's doing certain things doesn't necessarily ensure either good teaching or improved learning.

A more popular (and slightly better measure) of teaching effectiveness comes from student ratings of teacher effectiveness. There are a number of fairly well-developed instruments that allow the students to evaluate their teachers. If you decide to design one of your own, focus on those characteristics of good teachers which seem to make a difference. Even open-ended questions, e.g., "What did you like best about this class?" or "What could be done to make this class more effective?" can sometimes give the teacher useful information.

Of course, the ultimate test of teaching effectiveness is how well the students learn. There are several problems, however, with using learner achievement as a measure of teaching effectiveness. First, students may learn well despite the teacher. Second, it is difficult to know what would have happened had a teacher used a different approach; even though the students learned well, could they have learned better? Or, suppose that a class does very poorly. Were there extenuating circumstances? Were the textbooks poorly written? Would the students have done that poorly had another teacher taught the lesson? These last questions are not easy to answer, but they do suggest an important solution to the many problems of evaluating instructional effectiveness. That solution is to evaluate the various *components* of the instructional process separately rather than trying to obtain an overall measure. Suppose, for example, that we were developing a rating scale for students to evaluate the instruction in a high school English class. Instead of focusing all our questions on the teacher, we would also ask questions about some of the other components of instruction in that classroom. We might ask the students for their opinions about such things as the textbook, the workbook, the library assignments, the small-group discussions, the tests, etc.

A second major consideration when evaluating instruction is the choice of an appropriate referent. You must decide what you are going to use to compare your teaching to. Will you compare it to other teachers (e.g., by comparing your students' standardized achievement scores to the scores of other classes in your school district)? Or, will you be judging your teaching effectiveness by some predetermined criterion (e.g., "At least 80% of my students should score at or above grade level on the *Iowa Test of Basic Skills*)? Or, will you use a self-referenced approach (e.g., comparing the student ratings from this semester with those of the previous two semesters)? All three of these

Biology prof guarantees C or better

By Tina Burnside
• The Minnesota Daily
U. of Minnesota, Twin Cities

Genetics and cell biology professor Val Woodward has an offer most University students can't refuse. If you take his heredity class, he'll guarantee you won't get a D or an F. This quarter, more than 600 students are enrolled in Biology 1101: Heredity and Human Society.

"I had heard from other students that it was an easy class, so I took it," said junior Lisa Smith. "I barely went to class except on the quiz days, but I passed. It was great."

But Woodward has a reason for his grading policy. "This is not a class designed to weed people out," he said. "It is designed to help students gain an insight about themselves and give them a general understanding of genetics.

Woodward awards 25 percent of his class As, 50 percent Bs, and 25 percent Cs. Students who don't pass are given an incomplete. He admits that most students, but not all, take the course because it is considered easy.

Professors are free to determine their own grading policies, said Kathie Peterson, director of student services in the Genetics and Cell Biology Department.

"I'm taking the class because I have an interest in genetics and the class seems interesting," sophomore Tony Giombetti said.

"I like the idea of the teacher not wanting to hold students back, and that he is more concerned with students learning concepts rather than just memorizing facts."

Woodward said many introductory courses are in danger of being eliminated under the University's Commitment to Focus improvement plan.

"They would like to get rid of these courses. They want students to enter the University ... and start working directly on their majors, and not fool around with these so-called 'Mickey Mouse' courses," he said.

"I flatly disagree. This class is designed to give everyone an equal opportunity to an education, not to eliminate a few."

EDUCATION

A-F grading system flunks student's evaluation

By Steve Fifield
• The Minnesota Daily
U. of Minnesota, Twin Cities

For students, death and taxes are not the only certainties in life. Grades can be added to this pair to create an unpleasant trio. The efficacy of the A-F grading system has been uncritically accepted by most educators, students and parents; it is tightly linked with our notion of education, while labeling students as "winners," "losers" or "just average" in the process.

Why do schools give grades? The most cynical explanation—that students would not do any work without the stimulus a grading system provides—points to some very serious flaws in our formal education system. It is the task of teachers to challenge students with relevant material and to present it in creative and stimulating ways. It is the task of students to leave the mind-numbing attractions of our video culture behind and engage wholeheartedly in their own education—a worthwhile goal in its own right.

Grades serve as verdicts rather than diagnostic aids. A "C" on an exam probably indicates misconceptions a student should clear up before continuing on to new material. Given a chance to review the material in light of mistakes, that person could become a "B" student. Unfortunately, some instructors believe this approach is too easy on students—an attitude arising from the mistaken notion that the purpose of teaching is to assign grades rather than promote learning.

While the A-F grading system is deeply entrenched in the education system, instructors can make their courses more positive experiences for students. The first obstacle many college instructors must overcome is the tendency to teach as they were taught. Today's professors need to think about alternative teaching techniques.

All instructors should consider producing a set of specific learning objectives for their courses and make these available to students on the first day of class. Professors should also clearly state and justify the competence level required to earn a certain grade.

The best courses incorporate instructional objectives, criterion-referenced grading and some form of mastery learning.

Learning is not easy and first attempts are often inadequate. No group of people should understand this better than professors who have struggled to complete articles, grant proposals or books only to have them rejected and returned for revision. Grades stick with students for a long time, and students are entitled to give their best possible performance before receiving a final grade.

Using the A-F grading system in a more equitable way will require the cooperation of professors, students and administrators. Innovative teaching must be valued as much as the research money pulled in by the faculty. Now is the time to be more open-minded and creative about teaching.

Lesson Plan XIV
Course Design Decisions

Objectives:

The participants will develop a familiarity with the research on class size.

The participants will be able to determine when classes need to be small and the kinds of students that benefit from small classes.

The participants will develop a familiarity with the relationship between goals, class size and methodology.

Content: (Chapter 19 McKeachie)

Research on class size.

Determining when classes need to be small.

Kinds of students that benefit most from small classes.

Goals class size and methodology.

Activities:

Interactive presentation on the above topics.

Course evaluation

Evaluation:

Participation in the interactive process

Below are several optional open-ended questions designed to provide the instructor feedback on his/her instructional techniques, and to allow you the opportunity to express more precisely your opinion of the course. These are intended to be anonymous. SO PLEASE DO NOT SIGN YOUR NAME. THE FORMS WILL NOT BE EXAMINED BY EITHER THE INSTRUCTOR OR THE DEPARTMENT UNTIL AFTER GRADES HAVE BEEN ASSIGNED!

A. What were the strong points of the course?

B. What were the weak points of the course?

C. What should the instructor do to improve his/her teaching?

D. What is your overall opinion of the course?

Reading List
College Teaching Preparation

Adler, Mortimer J., The Paideai Proposal: An Educational Manifesto (New York: MacMillan, 1982)

Alexander, A. Astin., Four Critical Years (San Francisco: Jossey-Bass, 1977)

Art and Craft of Teaching, Editor: Margaret M. Gullette, (Cambridge, Mass.: Harvard-Danforth Center for Teaching and Learning, 1982)

Axelrod, Joseph., The University Teacher as an Artist (San Francisco: Jossey-Bass, 1973)

Belenky, Mary F.; Clinchy, Blythe M.; Gooldberger, Nancy R.; and Tarule, Jill M., Women's Ways of Knowing: The Development of Self, Voice, and Mind (New York: Basic Books, 1986)

Bell, Daniel., Reforming General Education (New York: Columbia University Press, 1966)

Bennett, W., To Reclaim a Legacy (Washington, D.C.: National Endowment of the Humanities, 1984)

Bloom, B.S., Englehart, M.D., Furst, E.J., Hill, W.H. and Krathwohl, D.R. Taxomy of Educational Objectives: Handbook I, Cognitive Domain (New York: David McKay, 1956)

Bok, Derek., Higher Learning (Cambridge: Harvard University Press, 1986)

Boyer, Ernest L., College: The Undergraduate Experience in America (New York: Harper and Row 1987)

Brown, James and Thornton, James., College Teaching: A Systematic Approach (McGraw Hill, 1971)

Brubacher, J.S., On the Philosophy of Higher Education (San Francisco, Jossey-Bass, 1982)

Carnegie Foundation for the Advancement of Teaching, The Control of he Campus: A report on the Governance of Higher Education (Princeton: rinceton University Press, 1982)

hickering, Arthur., Education and Identity (San Francisco: Jossey-ass, 1974)

hickering, Arthur and Associates., The Modern American College (San ancisco: Jossey-Bass, 1981)

Cross, K. Patricia., Accent on Learning: Improving Instruction and Reshaping the Curriculum (San Francisco: Jossey-Bass, 1976)

Dubin, R. and Taveggia, T.C., The Teaching-Learning Paradox (Center for the Advanced Study of Educational Administration: University of Oregon, 1968)

Eble, Kenneth E. The Craft of Teaching (San Francisco: Jossey-Bass, 1976)

Eble, Kenneth E., Professors as Teachers (San Francisco: Jossey-Bass, 1972)

Epstein, Leon D., Governing the University: The Campus and the Public Interest (San Francisco: Jossey-Bass, 1974)

Feldman, K. and Newcomb, T., The Impact of College on Students (San Francisco: Jossey-Bass, 1969)

Fuhrmann, Barbara S. and Grasha, Anthony F., A Practical Handbook for College Teachers (Boston: Little, Brown and Company, 1983)

Gage, N.L., The Scientific Basic of the Art of Teaching (New York: Teachers College Press, Columbia, University, 1977)

Gronland, N.E., Stating Objectives for Classroom Instruction, 2nd ed., (New York: Macmillan, 1978)

Hoover, Kenneth E. College Teaching Today: A Handbook for Postsecondary Instruction (Boston: Allyn and Bacon, 1980)

Hopkins, K.D. and Stanley, J.C., Educational and Psychological Measurement and Evaluation (Englewood Cliffs, N.J.: Prentice Hall, 1981)

Hyman, Ronald T., Way of Teaching, 2nd ed., (Philadelphia: J.B. Lippincott, 1974)

Kolstoe, O.P. College Professoring (Carbondale: Southern Illinois University Press, 1975)

Kozma, Robert, Belle, L. and Williams, G. Instructional Techniques in Higher Education (Englewood Cliffs, NJ: Educational Technology Publication, 1978)

Levine, Arthur., Handbook on Undergraduate Curriculum (San Francisco: Jossey-Bass, 1978)

Lowman, Joseph, Mastering the Techniques of Teaching (San Francisco: Jossey-Bass, 1984)

Mager, Robert F., Preparing Instructional Objectives (Belmont, CA: David Lake Publishers, 1984) aier, N., Problem-solving Discussion and Conferences: Leadership ethods and Skills (New York: McGraw-Hill, 1963)

Mann, R.D. The College Classroom (New York: J. Wiley, 1970)

Mayhew, Lewis., The Collegiate Curriculum: An Approach to Analysis (Atlanta: Southern Regional Education Board: Atlanta, 1967)

McKeachie, Wilbert J., Teaching Tips: A Guide Book for the Beginning College Teacher (Lexington, Mass: D.C. Heath, 1986)

Milton, Ohmer, and Associates, On College Teaching (San Francisco: Jossey-Bass, 1978)

Olmstead, J.A., Small-group Instruction: Theory and Practice (Alexander, VA: Human Resources Organization, 1974)

Perry, William G., Forms of Intellectual and Ethical Development in the College Years (New York: Holt, Rinehart and Winston, 1970)

Rudolph, Frederick., The American College and University: A History (New York: Knoph, 1962)

Small Group Discussion: A Reader, 2d ed., eds. Cathcart, Robert S. and Samovar, Larry A. (Dubuque, Iowa: William C. Brown, 1974)

Sykes, Charles J., ProfScam: Professors and the Demise of Higher Education (Washington, D.C. Regnery Gateway, 1988)

Tchudi, S.N., Teaching Writing in the Content Area: College Level (Washington, D.C.: National Educational Association)

GENERIC COLLEGE TEACHING SKILLS
Course II

Course Description:

Generic College Teaching Skills is the second of a three course sequence during which the participants will be involved in the development of teaching skills and the demonstration of those skills in a classroom setting and will receive appropriate feedback.

Course Goals:

1. The participants will develop an understanding of the skills and knowledge necessary for teaching.

2. The participants will develop an understanding of the skills necessary to observe teaching performances and provide effective feedback.

Course Objectives:

1. Classroom Techniques

   By the end of the course the participants will have developed knowledge and the ability to demonstrate the following techniques.

   A. Meeting Class for the First Time.
   B. Written Assignments
      Videotapes
         How to evaluate unconventional papers
         Possible Plagiarism
         Working student needs time extension on paper
   C. Grading
      Videotapes
         Student protests exam grade
         "I need an A. What do I have to do to get an A?"
         Student requests extra work
         Is attendance required?
         Student feels exams were unduly difficult

2. Instructional Procedures

   By the end of the course participants will demonstrate a knowledge and use of the following teaching skills.

   A. Questioning Strategies
   B. Feedback for Learning
   C. Leading Discussions
      Videotape
         Student-student conflict in discussion
   D. Notes and Notetaking
   E. Review Processes
   F. Model for Effective Teaching

3. Instructional Methods
   By the end of the course the participants will demonstrate a knowledge of the following Instructional Methods and use of selected instructional methods.

   A. Inquiry Method
   B. Discussion

4. Evaluating Teaching Performances

   By the end of the course the participants will develop and carry out an evaluation plan.

   A. Evaluation of Teaching Performance
   B. Evaluating Teachers
   C. Soliciting Feedback from Students

Text

McKeachie, Wilbert J., Teaching Tips: A Guide for the Beginning College Teacher (Lexington, Mass.: D. C. Heath; 1986).

Course Evaluation

The grade to be reported at the end of this course will be an "S" or "U". Grades are based on the following activities, and performance is assessed according to standards specified by the professor: participation in class discussion and presentation of class assignments, presentation of data from two observations on one of your peers, evidence of two observations by your faculty coordinator, and one observation by the course instructors.

The observations will be made on the demonstration of selected teaching behaviors. The observations will be submitted to the course instructors. A form will be provided for the observation.

Course Instructors

Gene Shepherd
205 Collings Hall
325-1508

Tony Romano
230A Collings Hall
325-3972

Course II
Generic College Teaching Skills
Schedule of Events

Week I

Content

Describe Syllabus
Process for meeting class for the first time

Assignment

Read Chapter 10--McKeachie: "Term Papers and Teaching Writing"

Week II

Content

Term Papers
Alternative ways of working with students on written assignments
Correcting papers and giving feedback
Role Play (How To)

Week III

Content

Role Play - Incidents on written assignments

Assignment

Read Chapter 9--McKeachie: "The ABC's of Assigning Grades"

Week IV

Content

Assigning Grades
Role Play - Incidents on Grading

Week V

Content

Grading
Class Concerns and Conflict

Assignment

Read Handout on the Model for Effective Teaching

Observation

By Faculty of Students Taking Course

Week VI

Content

Model for Effective Teaching

Assignment

Observe a faculty member teaching:

From observation cite evidence that the faculty member follow the lesson line.

Observation

By Faculty of Students Taking Course

Week VII

Content

Question Sequencing Elements

a. Distribution
b. Load
c. Wait Time
d. Student Response
e. Teacher Response

Assignment

Observe a faculty member teaching
Audio Tape the teaching episode
Analyze the questions to determine which and how many students participated and the cognitive level of the questions.

Observation

By Faculty of Students Taking Course

Week VIII

Content

Classification and Analysis of Classroom Questions

Assignment

Tape class you teach:

Observe for--Tape, Load, Wait Time, Participation, Dead end, Run On, Programmed Answer, Put Down, Fuzzy, Convergent, Divergent Questions

Observation

By Faculty of Students Taking Course

Week IX

Content

Corrective Feedback
Reinforcements

Assignment

From the Tape of Class you recorded:
Check for corrective feedback and reinforcements to questions.

Observation

By Faculty of Students Taking Course

Week X

Content

Corrective Feedback and Reinforcement on data collected by students from a class which they taught.
Discussion of Data Collected by Program Faculty from classes which the students taught.

Observation

By Faculty of Students Taking Course

Week XI

Content

Discussion
Role Play - Incidents Concerning Discussion

Observation

By Faculty of Students Taking Course

Week XII

Content

Inquiry Process
Notes and Notetaking

Assignment

Read Chapter 30--McKeachie--Student Ratings on Faculty

Observation

By Faculty of Students Taking Course

Week XIII

Content

Review Processes
Develop Student Evaluation Questionnaire

Assignment

Administer the developed evaluation to students in your classes and summarize information.

Observation

By Faculty of Students Taking Course

Week XIV

Content

Students' Evaluation
Student Ratings of Faculty
Course Evaluated
Teacher Behavior Inventory

Course 2

Generic College Teaching Skills

Lesson Plan I

Objectives:

The participants will acquire basic knowledge of the expectations of course 2.

The participants will acquire the basic knowledge of a process for meeting a class for the first time.

Content:

Syllabus for Course 2

Process for Meeting a Class for the First Time:
(See Attached Notes)

Activities:

Introductions

Handout and Describe Syllabus

Interactive process on meeting a class for the first time.

Assignment:

Read Chapter 10 in McKeachie
"Term Papers and Teaching Writing"

Evaluation:

Participation in the interactive process on Meeting Class for the First Time.

Process for Meeting a Class for the First Time

1. Break Ice

    Have them talk -- Get acquainted in some fashion

    You want to establish a degree of freedom of communication in your class.

    Have your objectives for the course written on the board discuss objectives.

2. Present Syllabus

    to include course outline

3. Introduce Text

    If there is going to be disagreement between material in the textbook and that you will present in class an explanation is in order.
    Avoid tirades against the author -- severe criticism

    Explain that rival interpretations stand or fall on the basis of pertinent evidence and plan to give your reasons for disagreeing with the text.
    - This will give the student the notion that your opinions are based upon evidence.
    - It will frequently point up current problems in the theory that often have great appeal for the serious student.

4. Problem Post

    What problems you'd like to tackle during this course?
    What problems you'd like to have us tackle during this course?
    What sort of concerns do you think we might deal with?
    What kinds of things have you heard about this course?
    Record Answers on the chalkboard.

    Allows for participation
    - Understand rather than compete with one another
    - reduce attitude that everything must come from the teacher
    - teacher can listen as well as talk
    - some responsibility for solving own problems

5. Hand out an Index Card

    ask the students to write down what they think of the first class anonymously

    1. Indicates interest in learning from them and start building a learning climate -- and influencing your teaching.

2. It gives you feedback, often revealing doubts or questions students were afraid to verbalize orally.

Content

----- Establishing a good atmosphere for a class is an important aspect of teaching well
Getting off to a good start is as important to that atmosphere as what comes after.

----- First class should be interesting and challenging

To a group of students first class is going to be exciting and anxiety producing

The teacher who hands out the syllabus and leaves does not convey the message that the class is valuable nor do they capitalize on the excitement

----- Remember this is not the students only class
They come to you from other classes
Must aid in shifting thoughts and feelings

----- Can gradually ease them into the course

Can grab their attention by doing something different

Course 2

Generic College Teaching Skills

Lesson Plan II

Objectives:

The participants develop alternative ways of dealing with writing in the classroom.

The participants will develop processes for correcting papers and giving feedback.

The participants will develop the skills necessary for the technique of Role Play.

The participants will participate in Role Playing activities on incidents concerning written assignments.

Content:

Chapter 10 McKeachie
    Term Papers and Teaching Writing

Term Papers:
    Problems
    Alternative ways of working with students on writing papers.
    --Break Process (Series of Reports)
    --Library Research Paper
    --Other types of writing

Correcting Papers and Giving Feedback

Role Playing
    Handout on ground rules for Role Play.

    View tape of Role Playing process to introduce the students to the process.

    View tape of Role Playing process to introduce the students to the process.

View Tape of Incidents on Writing:

    --Extension on paper
    --Possible Plagiarism
    --Evaluating Unconventional Papers
    --(Probably won't get to all of these)

Activities:

Interactive process on Writing

View film on Role Play
Use handout and work with how to role play.

View film of Incidents
Written Assignments and Role Play

Evaluation:

Participation in interactive process on writing.

Participation in role playing.

Ground Rules for Role Playing on:

"How to Handle Classroom Problems"

1. Let the situation be real. Although we may think we would never let ourselves get into a situation like this, we have all had the experience of getting into situations we did not think we would get into.

2. Be the teacher and the student you see. For the same reasons as in Number 1.

3. Don't worry about the "best" response. Rather, search to find a "good" response or a "better" response.

4. Your criteria should be: let the student leave with the relationship at least no worse than when the student entered.

5. Don't just talk about how you would handle the situation, but actually "act out" the situation. You need to feel the pressure of time and yet go beyond a "quick response."

6. When you role play the student, don't "roll over and play dead." That is, don't give up this student's felt needs too easily. By the same token, don't be unreasonably obstinate. Play the role as you think this student would, given the way they feel.

7. The teacher might want, from time to time, ask for information from the student. In this case, it helps the role play. In real life, it also gives you valuable time to think as well as valuable information.

8. As the teacher, you need to respond to the student with respect for the student's feelings. Assume the student wants to do something they feel is right for them; respect that, even if you do not agree with it.

9. Be honest with yourself and the rest of the group about how you would really react.

10. Try to empathize and understand, really understand, the student's situation and feelings.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
" 3: Overly talkative student
" 4: Students whispering in class
" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan III

Objectives:

The students will participate in Role Playing activities on incidents concerning written assignments.

The participants will develop skills in handling students problems during conferences through the role playing activities.

Content:

Role Playing

Tapes of incidents on written assignments.

Episodes
1. Time Extension
2. Possible Plagiarism
3. Evaluating Unconventional Papers

Activities:

View tapes of incidents on written assignments and have the participants role play.

One participant will play the faculty member and another participant will play the student.

After role play----discussion by other members of the class to ascertain the success of the conference.

Assignment:

Read Chapter 9 in McKeachie
"The A B C's of Assigning Grades"

Evaluation:

Participation in role play.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
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" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan IV

Objectives:

1. The participants will participate in an Interactive discussion on assigning grades.

2. The participants will participate in Role Playing activities on incidents concerning grading.

Content:

1. Review of assigning grades.
   McKeachie--Teaching Tips--pages 110 through 121

2. Role Play
   Tapes of Incidents on Grading

   1. I need an A what do I have to do to get an A?
   2. Student protests exam grade
   3. Student requests extra work
   4. Is attendance required
   5. Student feels exams were unduly difficult

Activities

Interactive Process to review grading

View Tapes of incidents on grading and Role Play

Evaluation

Student participation in the activities.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
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" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Play V

Objectives:

1. The participants will participate in Role Playing Activities on incidents concerning grading.
2. The participants will participate in Role Playing Activities on incidents concerning class concerns and conflicts.

Content:

1. Tapes of Incidents on Grading
   a. Is attendance required
   b. Student feels exams were unduly difficult.
2. Tapes on Class Concerns and Conflict
   a. Class is uncooperative with teacher
   b. Overly talkative student
   c. Student sleeps in class
   d. Students whispering in class
   e. Student needs a lots of inclass explanations
   f. Student introduces lots of personal ideas

Activities:

View Tapes of incidents on grading and role play.

View Tapes of incidents on Class Concerns and Conflict and Role Play.

Evaluation:

Participants participation in the activities.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
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" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Course 2

Generic College Teaching Skills

Lesson Plan VI

Objectives:

1. Participants will develop a basic knowledge of the "Lesson Line" adapted from the Program for Effective Teaching"

Content:

Model for Effective Teaching:
  Explanation of the Lesson Line
  1. Set

  2. T_2O

     Explanation
     Questions
     Respond to Learner
     Direction Giving
     Activities

  3. Closure

See Handout:

Activities:

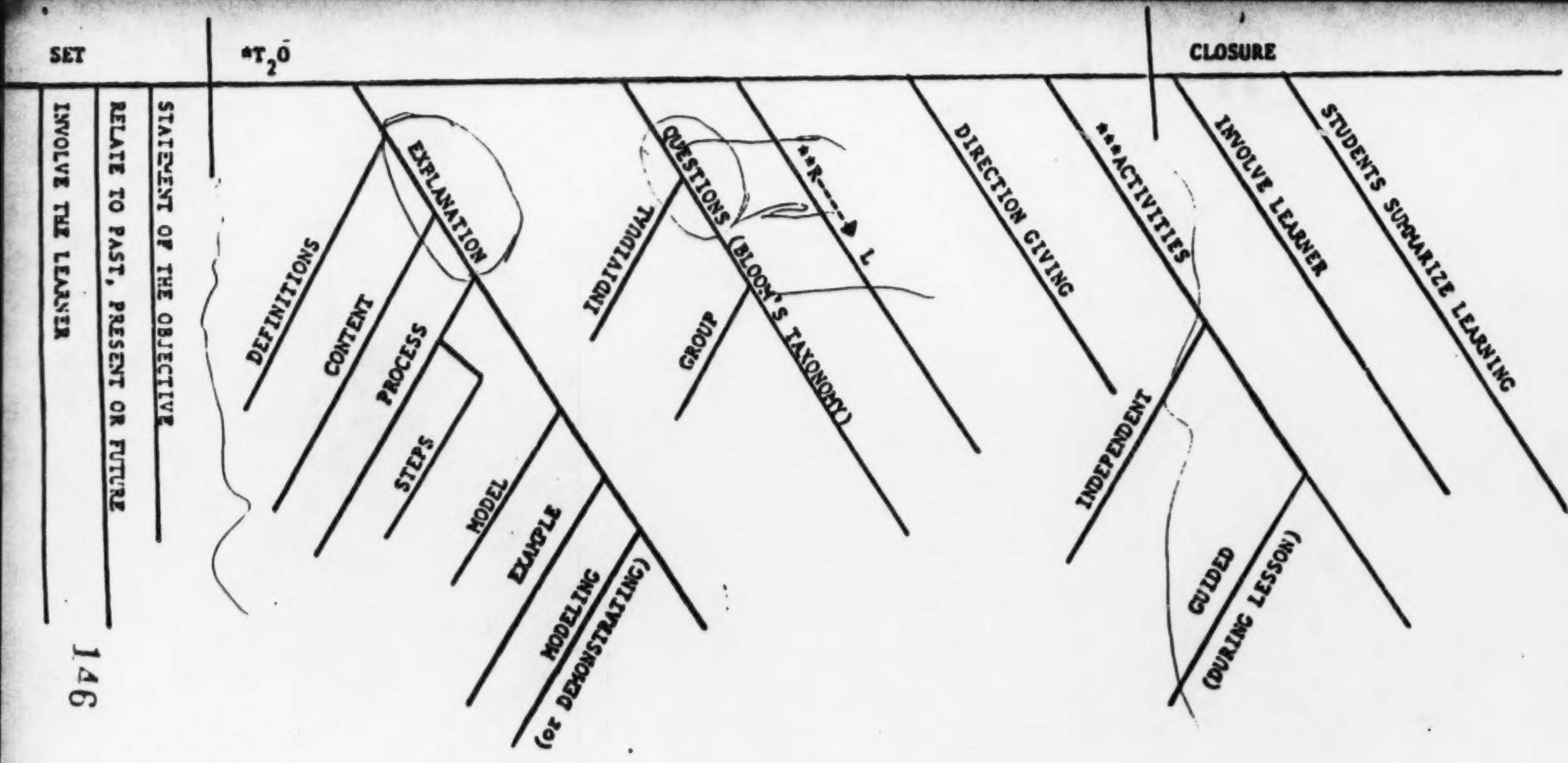
Interactive discussion on the Model for Effective Teaching

Assignment:

Observe a faculty member teaching:
  From observation cite evidence that
    the faculty member followed the lesson line.

Evaluation:

Participation in the lesson.


SET
*T2O
CLOSURE
INVOLVE THE LEARNER
RELATE TO PAST, PRESENT OR FUTURE
STATEMENT OF THE OBJECTIVE
EXPLANATION
DEFINITIONS
CONTENT
PROCESS
STEPS
MODEL
EXAMPLE
MODELING
(or DEMONSTRATING)
QUESTIONS (BLOOM'S TAXONOMY)
INDIVIDUAL
GROUP
**R----▶ L
DIRECTION GIVING
***ACTIVITIES
INDEPENDENT
GUIDED
(DURING LESSON)
INVOLVE LEARNER
STUDENTS SUMMARIZE LEARNING

--CHECK YOUR TEACHING. DO YOUR LESSONS HAVE ALL OF THE PARTS OF THE LESSON LINE? GREAT!

* T_2O - TEACH TO THE OBJECTIVE.

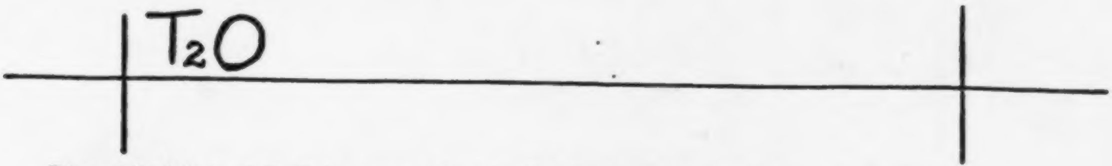
**R → L - RESPONDING TO THE LEARNER INCLUDES REPEATING THE CORRECT ANSWER, GIVING POSITIVE FEEDBACK AND SAYING THE STUDENTS'S NAME.

***ACTIVITIES - GUIDED - ALLOWING STUDENTS TO PRACTICE WHAT YOU TEACH.
INDEPENDENT - WHEN THEY MASTER THE WORK GIVE THEM SEATWORK OR HOMEWORK.

ADAPTED FROM THE PROGRAM FOR EFFECTIVE TEACHING MODEL.

THE LESSON LINE

The Lesson Line provides a structure for describing and analyzing what good teachers do when they teach a lesson in the deductive mode. There are three major parts to the Lesson Line. The largest part and the center part of the Lesson Line is referred to as T_2O, Teaching to the Objective.



The definition of T_2O is generating in the learner overt behavior that is relevant in the learning.

There are five components in Teaching to the Objective. They are:

Component I: EXPLANATION refers to how we give the learning, the information, to the students. Six ways of giving explanation have been recommended.

a. Definition - stating the definition of the concepts or terms to be learned.
Ex: A set is a collection of objects that have something in common.
Ex: A fault is a crack in the earth's surface.
Ex: Migration is the trip animals make when they change home sites from one season to another.

b. Content - presenting statements of fact that describe concepts, that describe objects, people, situations, or events; and presenting generalizations that relate two or more concepts. This information can be presented verbally by the teacher or through some other auditory or visual stimuli.

c. Process - presenting in sequential order the steps involved in doing something.
Ex: Talking through the steps of a math formula or any problem solving process.
Ex: Presenting the steps in film making.
Ex: Presenting and talking through the steps of finding words in the dictionary using guide words.

d. Model - Presenting a concrete representation of the concept or idea that you want children to understand.
Ex: An actual object like an apple or a cow's heart.
Ex: A scaled representation of a building, a volcano, an atom, a dinosaur, a terraced field, or the solar system.
Ex: A full size representation of something, like, the skeleton of a persons body, a set of teeth, or a machine that is constructed in such a way that the workings of the inner parts can be seen.

e. Example - one of a number of items that are members of a class or category labeled as a concept. Examples can be presented in concrete form, semi-concrete form, semi-abstract form, or abstract form.
Ex: fossils of different life forms
Ex: pictures of islands or lakes
Ex: drawings of atoms or cells
Ex: words which label examples or written descriptions of examples of the concept - the words box, watch, bike presented as examples of nouns, or written questions presented as examples of questions.

f. Modeling - demonstrating how it is you want children to proceed.
   Ex: Showing and talking through the steps in solving a problem like you want children to.
   Ex: Showing and talking through the steps in making an orgami object,
   Ex: Showing and talking through the formation of letters in the alphabet.
   Ex: Demonstrating and describing how to conduct an interview.

The 6 different ways of providing EXPLANATION can be combined in a number of ways. For instance in teaching the concept of "perimeter" the teacher might define perimeter, present examples of problems wherein it would be necessary to find the perimeter, describe the process for finding the perimeter of a region, and show how to find the perimeter by modeling the process in finding the perimeter of a desk top.

Component 2: QUESTIONING is used by the teacher to check for understanding, to find out how well the information is being assimilated, and what parts of the explanation are or are not being understood. Questions can be distributed to individuals or to groups of children and should be asked throughout the EXPLANATION to keep students involved as well as to get feedback on the effectiveness of the teacher's explanation. Group responses can be monitored by giving the students some kind of non-verbal signal to use for their responses. Codes for Question Types, Load, and Expansion Questions can be used to monitor a teacher's use of questions.

Component 3: R ---> L, RESPONDING TO THE LEARNER IN TERMS OF THE LEARNING. This teacher action occurs when student's have been given an opportunity to interact with the content of the lesson and usually follows a teacher question or direction to students. Madeline Hunter says there are three parts to responding to the learner in terms of the learning.

a. say the student's name
b. clearly accept or reject the student's response
c. repeat the learning

The combination of these three parts corresponds to 5a,b,ci and 6a,b,ci in Targeted Verbal Reinforcement. If a student's answer must be rejected it is important to redirect the child's thinking in a positive direction and as soon as possible to give that same child an opportunity to respond successfully.

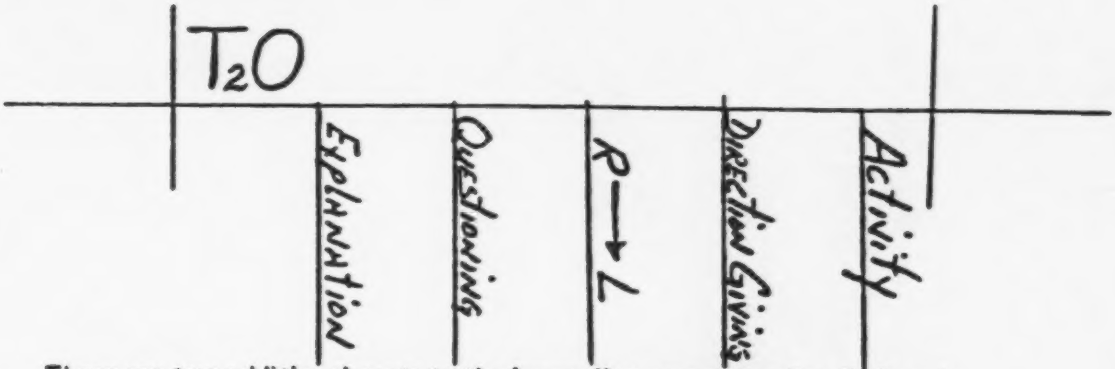
Component 4: DIRECTION GIVING refers to directions the teacher gives to individuals or the group to engage them in interactions with various forms of explanation and activities.

Component 5: ACTIVITY refers to engaging the students in activities so they can organize information, demonstrate their understanding, practice their skills, or express themselves in creative ways. Madeline Hunter desribes activities in two ways in terms of the teacher's involvement.

a. Guided Activities - These activities are carefully monitored by the teacher to insure that students are proceeding in the appropriate manner and to make sure students possess the necessary understandings to proceed on their own.

b. Independent Activities - These activities may be very similar to guided activities or may be challenging activities which have their bases in the explanations given. Independent activities can be done by students without the assistance of the teacher. Independent activities should always be preceded by guided activities.

The five components of T_2O, Teaching to the Objective are EXPLANATION, QUESTIONING, RESPONDING TO THE LEARNER IN TERMS OF THE LEARNING, DIRECTION GIVING, AND ACTIVITY.



There are two additional parts to the lesson line, one preceding T_2O and one following T_2O. These two sets of teacher actions are members of a concept referred to as Maintaining the Focus of the Learner.

Before Teaching to the Objective the teacher builds an ANTICIPATORY SET.

ANTICIPATORY SET refers to what the learner is led to anticipate in the upcoming lesson and has 3 parts. The SET gets the students ready for the EXPLANATION. The three parts of the SET are:

a. Involvement of the learner. Something is done or said by the teacher that "hooks" the learner, that makes the learner say to him/herself, 'I want to find out more about this.'

b. Relate to past, present, and/or future. This refers to something the teacher says to relate the learning which is about to occur to something in the students' past, future, and/or to something else that concerns students in the present.

c. Statement of the objective. This refers to a statement made by the teacher that tells students what they are going to learn.

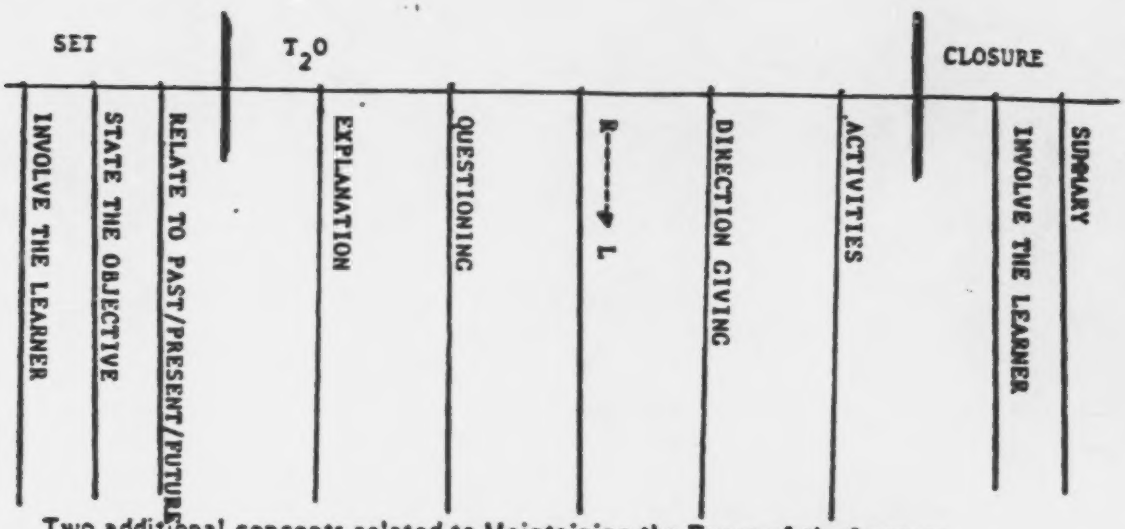
After Teaching to the Objective, the teacher provides CLOSURE.

CLOSURE refers to pulling together what has been learned during the lesson and has 2 parts.

a. Involvement of the learner. The teacher directs or questions the students in ways that get them to summarize the lesson.

b. Summary - recall the main points, concepts, and/or purpose of the lesson. reflect on how what has been learned relates to other learnings possessed by the learners.

The following diagram illustrates all parts of the LESSON LINE.


SET
T2O
CLOSURE
INVOLVE THE LEARNER
STATE THE OBJECTIVE
RELATE TO PAST/PRESENT/FUTURE
EXPLANATION
QUESTIONING
R → L
DIRECTION GIVING
ACTIVITIES
INVOLVE THE LEARNER
SUMMARY

Two additional concepts related to Maintaining the Focus of the Learner are Overt and Covert Behavior. Overt Behavior refers to the observable behavior exhibited by students that gives the teacher feedback about students' thinking and understanding. Covert Behavior refers to the undisclosed thinking of students. Throughout any given lesson the task of the teacher is to set up an interaction between teaching and learning. To teach for a high degree of learning the teacher sets up conditions for effectively presenting the content of the lesson and for engaging students in overt as well as covert behaviors as they participate in the learning process. Throughout the lesson, beginning with the ANTICIPATORY SET, throughout TEACHING TO THE OBJECTIVE, and continuing through CLOSURE the teacher maintains the focus of the learners by questioning them, by structuring their behavior, and by responding to the learner in terms of the learning.

Course 2

Generic College Teaching Skills

Lesson Plan VII

Objectives:

1. The participants will determine if the faculty member they observed teaching followed the "Lesson Line."
2. The participants will develop a basic knowledge of the Question Sequencing Elements.

Content:

Question Sequencing Elements

a. Distribution
b. Load
c. Wait Time
d. Student Response
e. Teacher Response

(See Handout)

Activities:

Through questions and discussion the participants will determine if the faculty member which they observed followed the "Lesson Line."

Interactive discussion on the Question Sequencing Elements.

Assignment:

Observe a faculty member teaching. Audio Tape the teaching episode. Analyze the questions to determine which and how many students participated and the cognitive level of the questions.

Evaluation:

Participation in the lesson.

QUESTION SEQUENCING ELEMENTS

Distribution

Question Types

- Solitary
- Controlled
- Voluntary
- Spontaneous
- Mass

Action Zones

- Personal
- Social
- Semi-Public
- Public

Load

Taxonomy (Cognitive)

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Taxonomy (Affective)

- Receiving/Attending
- Responding
- Valuing
- Organization
- Characterization

Taxonomy (Psychomotor)

- Reflex Movements
- Basic-Fundamental Movements
- Perceptual Abilities
- Physical Abilities
- Skilled Movements
- Non-Discursive Communication

Wait Time

Self-Fulfilling Prophecy

- Gender
- Ethnic/Racial
- Ability
- Conduct

Student Response

Teacher Response

Targeted Verbal Reinforcement

- Polarity
- Area
- Focus

Expansion

- Active Listening
- Probing Questions
- Clarifying Questions
- Paraphrasing Feedback

(Shepherd/Gallaher)

Course 2

Generic College Teaching Skills

Lesson Plan VIII

Objectives:

1. The participants, through discussion, will indicate (Question Element Sequence) question distribution, load, wait time for the faculty member they observed.

2. The participants will develop basic knowledge of classification and analysis of actual classroom questions.

Content:

Classification and Analysis of Some Actual Classroom Questions

1. Dead end
2. Run on
3. Programmed Answer
4. Put Down
5. Fuzzy
6. Convergent
7. Divergent

(See Handout)

Activities:

Discussion to Accomplish Objective 1.

Interactive process to accomplish Objective 2.

Assignment:

Tape class you teach:
Observe for--Type, Load, Wait time, Participation,
Dead end, Run On, Programmed Answer,
Put Down, Fuzzy, Convergent, Divergent

Evaluation:

Participation in the lesson.

USING QUESTIONS TO ENHANCE CLASSROOM LEARNING

Introduction

Many teachers unwittingly and subtly stymy students' intellectual development and growth of self-confidence by the ways they use and phrase questions. Rather than posing questions which provoke thoughts, evoke expression, encourage discussions, initiate arguments, raise further questions, and enable students to ask without embarrassment about what they do not understand, these teachers use and phrase vague, dead-end, or threatening questions, or suggest their own answers to the questions they pose. Conversely, instructors who have learned the skills of effective questioning are able to teach by their own example how to acquire and classify information, and to think logically. They change students from passive classroom spectators to active, creative participants in the learning process. Through the use of examples, this paper will attempt to help the reader become aware of how questions can subvert or enhance teaching goals.

In Part One, examples of actual classroom questions will be classified and analyzed; in Part Two, the components of an effective type of questioning strategy will be discussed; Part Three will offer some methods for using questions to stimulate thinking and enhance classroom learning.

It is my strong belief that learning is enhanced when the learner does something with the material presented. In this spirit, I have designed tasks throughout this paper to engage each reader and reinforce the ideas under investigation.

PART ONE:
Classification and Analysis of Some Actual Classroom Questions

In a classroom whose climate is characterized by openness, a respect for ideas, and flexibility of teaching methods, students may well respond freely to half-phrased, poorly articulated, fuzzily worded questions. Too, in a class of highly motivated, interested students, ofttimes an instructor need do little else than suggest a topic, or pose a problem. Yet these atypical situations should not blind us to the need for good plans and thoughtful questions in structuring positive learning experiences for all students all the time.Few instructors would quarrel with the statement that questions should provoke thought and evoke expression. (Stevens, 1912). Yet my own analyses of questions taken verbatim from classroom dialogues indicate that many faculty question their students in ways which confuse thinking and suppress responses. Five such types of questions are described here: the "Dead-End" or Yes-No Question; the "Chameleon" Question; the Question with a Programmed Answer; the Put-Down Question; and the Fuzzy Question. Those observing videotaped recordings have picked up the more obvious consequences of each of these question-types: students' facial expressions show puzzlement, annoyance, despair; their hands gesture in confusion; they shrug their shoulders and raise their eyebrows; and they often greet these questions with an almost total lack of verbal response. In

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Napell, S. (1978). Using questions to enhance classroom learning. *Education* 99 (2).

each instance a change of wording and/or pace can result in a radically altered response. These will be suggested as each type is discussed.

THE "DEAD-END" (OR YES-NO) QUESTION

Examples:

a. Does everyone remember Snell's Law?
b. Dr. Trilling told you why they use this angle to design Polaroid sun glasses, right?
c. Does everyone understand what shifts the demand curves and the supply curves around?
d. Do you all see the difference between long-run and short-run costs?
e. Does scale mean anything at all?
f. Now do you see why I substituted the value of 0 in this equation?
g. Do you see how in *this* instance it would be different?

When asked about the intent of these questions, instructors usually respond that they want to make sure that their students do understand these subjects. However, few wait long enough for students to reply; most accept as evidence of general understanding one or two murmured yesses. And, even *were* everyone to respond with a "yes," what would the instructor *really* have found out? If we look over the representative seven "Dead-End" Questions, we can see that a slight change of wording, plus a willingness to wait for an answer would elicit responses telling the instructor more precisely what he[1] wants to know.

For example:

a. Does everyone remember Snell's Law?
a'. What does Snell's Law tell us?

b. Dr. Trilling told you why they use this angle to design Polaroid sun glasses, right?
b'. What did Dr. Trilling suggest was the reason for using this angle to design Polaroid sun glasses?

c. Does everyone understand what shifts the demand curves and the supply curves around?
c'. Let's list (or review) together some of the factors which cause the demand curves and the supply curves to shift.

For your own practice, turn back to the remaining four examples of the "Dead-End" type of question, and ask yourself what it is that the students need to explain. Then, try rephrasing the question to give you this feedback and give them the opportunity to express their understanding of, or problems with, the material.

THE "CHAMELEON" (OR RUN-ON) QUESTION

Examples:

a. What does it mean that he's a Scholastic?. . . Do you remember what Starr said about Scholasticism?. . . What did Chrystal say?. . . Well, who is this Scholastic studying?

---

[1] The reader is asked to accept the conventional use of the pronoun "his" and "him" as a reference to both sexes in order that the distraction of the him/her constructions may be avoided.

b. What abut Thomas Hutchinson?. . . Where is he writing this?. . . How is he writing?. . . Would he be likely to join the mob?. . . How much of an unruly mob is it?

c. Now we have this table, what are we doing?. . . What's the elimination that we need?. . . Last time, didn't we have the returned earnings of the parent and company sales?. . . What's the difference *this* time?

d. What is a demand curve?. . . Where does it come from?. . . Remember, we discussed one thing first: utility. . . What's marginal utility?

e. What kinds of things did they attempt to do?. . . Where did they attack?. . . You mentioned living conditions, what about that?

f. Now, what kind of Physics was going on at that time?. . . Did anyone have any hypothesis then?

g. How does one design a park?. . . Do you walk it?. . . Should it be on the periphery?. . . Should it be within the central city?. . . What examples have we of each?

h. Who sees a community?. . . What's under that tree?. . . Do you see a boundary between grass and litter country?

An examination of this second type of question illumines several of its characteristics. Each "question" although asked virtually in one breath, is in reality a series of questions; the first question of the series is different from the last. The questioner seems unclear about what it is that he is asking since each succeeding question requires a somewhat different answer.

The responses to Chameleon Questions are varied. Most students are often so unsure of what is being asked that they will sit silently to see what will happen; some quickly answer the easiest, the first, or the last question of the group. Some brave soul or those "on the spot" may ask, "What was your question?" or, "Would you mind repeating the question?"

Videotaped replay reveals a typical consequence of this questioning pattern. Hands will go up in response to the first question, a few will go down during the second, and those hands remaining up gradually will get lower and lower as the instructor finally concludes with a question very different from the one for which the hands were initially raised.

There are, in addition, subtle unobservable consequences of Chameleon Questions. Students barraged with many questions, all asked at once, are denied time to reflect and formulate answers. Their thinking does not follow any logical progression but, at best, jumps with the instructor's from topic to topic. They are not encouraged to express their thoughts, but rather discouraged from doing so as the thrust of the question changes so rapidly.

Assimilation of ideas and their orderly expression demand time. Instructors can model logical thinking and orderly expression by making sure that lesson goals are apparent in their questions, preparing questions ahead of time, then pausing to offer students sufficient wait-time[1]. These behaviors encourage students to suggest their own ideas, confront each other's opinions, raise further questions, and become active participants in classroom communication. (Napell, 1975).

To practice avoiding Chameleon Questions, look back at the eight examples listed and figure out how you would ask one clearly stated question. For example:

a. What does it mean that he's a Scholastic?. . . Do you remember what Starr said about Scholasticism?. . . What did Chrystal say?. . . Well, who is this Scholastic studying?

---

[1] "Wait-time" is defined as the amount of time after an initial question has been posed before the teacher answers it himself; repeats, rephrases, or adds further information to the question; or accepts an answer from a student. (Moriber, 1951).

a'. Both Professors Starr and Chrystal offered slightly different definitions of Scholasticism. Look over your notes at their definitions, and try to come up with one that will include their main points plus your own understanding of what this term means.

THE QUESTION WITH A PROGRAMMED ANSWER

Examples:

a. "What thoughts have you about impeachment? Do you think the proceedings are too lengthy? That partisan politics play too great a role? Is there enough evidence?"
b. "What role does collective bargaining play in higher education? Do we have any indications as to the effect of collective bargaining on curriculum? Is it going to rigidify it?"
c. "What reasons do you have to use that formula? Was it suggested in the homework chapter? Had you ever used it before? Or seen it used in this context?"
d. "What happens when we add the sums of the rows? Do we get skewed results?"
e. "Look at this shrub and tell me, what observations can you make? Do you see the dead stems? Are they damaged from insect feeding?"

This type of question programs the answer: it not only deprives the respondent from expressing his own thoughts by steering him towards the answers that the questioner expects, but also conveys the message that there is really little interest in what he thinks or says. Those who practice this pattern usually have altruistic justifications (e.g., "Silence after the posing of a question is embarrassing to the student;" "I feel impelled to help out by suggesting clues"), but they need to ask themselves honestly: "Is it I or the student who is uncomfortable after a second or two of silence?"; "Do I have confidence in the students' ability to think about the question and formulate a response?" and, most important, "Am I more interested in what the student has to say or in determining which of *my* answers he prefers?" Programming can be an effective tool in guiding students' thinking, suggesting possibilities, or modeling logical thought processes. However, it is important to be aware of its limiting effect when the goal is to court a wide variety of ideas. If yours is this latter goal, try asking one relatively open-ended question and waiting to hear the students' responses. For example, look back at the first question of this type. It can be changed to a question which allows the student to express his own ideas by asking: "What thoughts have you about impeachment?" and pausing to allow the student to express his own ideas. In this way you indicate your interest in his ideas and model more effective questioning and listening behavior. A willingness to listen helps to create in the classroom a community of learners in place of a super-ordinate-subordinate relationship between teacher and class.

THE PUT-DOWN QUESTION

Examples:

a. OK, Professor Brown went over this twice in lecture yesterday, and I just did it on the board. Any more questions?
b. Who can reword her answer the way you think I would say it?
c. Anybody so confident in his answer that he wants to come up and put it on the board?
d. That was one explanation, yes, but what's another more obvious one?
e. Does anybody know "King Lear" pretty well here?
f. Obviously, it's simply the same Lorentz we've used four times. Any questions?
g. I think the exam problems were pretty straightforward. Any questions?

h. Problem three, was there any question on that? We gave you the solutions, you just differentiated the first one; I don't think there should be any problems on that or the rest. Are there?

Students need to be able to ask questions, for "the questions we ask act like a lens clarifying or distorting information relevant and necessary to us." (Burkhart, 1969). The Put-Down Question is often used as a ruse: the instructor really does not want any further questions. The wording represents a dare to the most brazen, the most hardened, or the most desperate. Thus, instructors subtly dissuade students from asking for necessary clarification. How much more honest to invite those with further questions to meet during office hours . . . or to avoid asking for further questions entirely. Put-Down Questions are often indications of an instructor's ego-needs' taking precedence over his students' learning needs.

THE FUZZY QUESTION

Example:

a. Do you sort of understand what is the principle behind this?
b. Did you notice this business of friendship?
c. How do you suppose one would get such a thing as that?
d. How about plane mirrors?
e. Does everybody feel somewhat like that?
f. The question is, can we prove that? Who got some ideas on that?
g. Does that explain what's going on?
h. Anybody care to explain that in different words?
i. Let's do it for the globular cluster.
j. Is it in all red giants?

An important function of the classroom teaching-learning process is offering students opportunities to use the new vocabulary of the course. As instructors, we can model accurate usage of new terms not only by using them in our own discussion and responses, but also by using them in our questions. Students are better able and more willing to respond to our questions when we state clearly what it is we are asking and simultaneously offer some tools with which they can construct an answer. Compare the following pairs of questions for clarity and the assistance they offer:

a. Do you sort of understand the principle behind this?
a'. How would you describe the principle which accounts for these graph fluctuations?

b. Did you notice this business of friendship?
b'. In the Iliad, Homer often refers to the friendship between men. How would you explain his concept of friendship using the examples he cites?

c. How do you suppose one would get such a thing as that?
c'. Using what we've just learned about alleles, how could you account for the offspring's having these combinations?

DIVERGENT QUESTIONS

The kind of question probably asked least often in the classroom is what has been variously called the *divergent*, the *heuristic*, or the *creative* question. Such a question has no "right" answer. It is an open-ended question, requiring students to use both concrete and abstract thinking to determine for themselves an appropriate response. Students are free to explore the problem in whatever direction they prefer; they are asked to think creatively, to leave the comfortable confines of the known and reach out for the unknown. This is often more uncomfortable for the teacher than it is for the students, since the answers he or she receives cannot be classified as either right or wrong. But this is the fascination and challenge of divergent questioning. The teacher and the students free themselves to explore hypotheses and possibilities.

The following are divergent questions:

1. What might happen to our economy if the gasoline automobile were declared illegal for smog-prevention reasons?
2. If you were stuck on a desert island and the only tool you had was a screwdriver, what uses might you make of it?
3. What might happen if Congress passed a law preventing the manufacture and sale of cigarettes in the United States?
4. How would the story be different if the character had been strong and healthy instead of disabled?
5. How would life in the San Francisco Bay Area be different if the bay were filled in?
6. In what way would history have been changed had the Spanish Armada defeated the English in 1588?

Source unknown

Course 2

Generic College Teaching Skills

Lesson Plan IX

Objectives:

1. The participants, through discussion will indicate (Question Element Sequence) question distribution, load, wait time for a class which they taught and taped.

2. The participants will develop a basic knowledge of reinforcement and corrective feedback.

Content:

See Handout on Corrective Feedback

See Handout on Reinforcements

Activities:

Discussion to Accomplish Objective 1.

Interactive process to accomplish Objective 2.

Assignment:

From tape of class the participants recorded:

Check for corrective feedback to questions.

Check for reinforcements given.

Evaluation:

Participation in discussion to indicate Question Element Sequence.

Participation in the interactive process on corrective feedback and reinforcements.

QUESTION SEQUENCING ELEMENTS

Distribution

Question Types

- Solitary
- Controlled
- Voluntary
- Spontaneous
- Mass

Action Zones

- Personal
- Social
- Semi-Public
- Public

Load

Taxonomy (Cognitive)

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Taxonomy (Affective)

- Receiving/Attending
- Responding
- Valuing
- Organization
- Characterization

Taxonomy (Psychomotor)

- Reflex Movements
- Basic-Fundamental Movements
- Perceptual Abilities
- Physical Abilities
- Skilled Movements
- Non-Discursive Communication

Wait Time

Self-Fulfilling Prophecy

- Gender
- Ethnic/Racial
- Ability
- Conduct

Student Response

Teacher Response

Targeted Verbal Reinforcement

- Polarity
- Area
- Focus

Expansion

- Active Listening
- Probing Questions
- Clarifying Questions
- Paraphrasing Feedback

(Shepherd/Gallaher)

TARGETED VERBAL REINFORCEMENTS

Reinforcements are teacher responses intended to increase (acceptance), decrease (rejection) or extinguish (ignore) individual and/or group actions. A reinforcement may be classified as a "targeted verbal reinforcement" if it contains clarity of: polarity, area, and focus. It should be noted that clarity does not include the codes: 13; u; q.

			Codes
I.	Polarity		
	A.	Acceptance--Teacher responses intended to increase the frequency of occurrence.	5
	B.	Rejection--Teacher responses intended to decrease the frequency of occurrence.	6
	C.	Withhold or Ignore--Teacher responses which neither accept nor reject the occurrence.	13*
II.	Area		
	A.	Affective management--Teacher responses which stress the affective content or context of the occurrence.	a
	B.	Behavior management--Teacher responses which stress the physical conduct or behavior of the occurrence.	b
	C.	Cognitive management--Teacher responses which stress the cognitive content or context of the occurrence.	c
	D.	Unidentified management--Teacher responses which do not identify/specify the affective, behavior, and/or cognitive content, conduct and/or context of the occurrence.	u*
III.	Focus		
	A.	Group--Teacher responses directed toward group (i.e., "This group is analyzing carefully." "This class is talking too frequently.")	g
	B.	Individual--Teacher responses directed toward individual (i.e., "I like the way Tom is synthesizing the problem." "Yes, Mike, your feeling that ... is reasonable." "No, 16 is not correct, Gene." "Bill, sit down.").	i
	C.	Questionable--Teacher responses not specifically directed toward either individual or group (i.e., "Those are good ideas." "Sit down." "There is too much talking." "I see good listeners.")	q*

*The presence of codes: 13; u; q indicates that the reinforcement is not targeted.

G. D. Shepherd

FEEDBACK

The value of practice and feedback in improving learning is one of the most consistent findings from teacher effectiveness literature (Brophy and Good, 1986; Rosenshine and Stevens, 1986).

Specific feedback is clear about what was right or wrong in response. Interestingly this characteristic is not always present.

> Mr. Smith: "What kind of relationship must exist if triangles are similar, Jim?"
> Jim: "Their sides have equal lengths."
> Mr. Smith "No, that's not right. Don?"

Mr. Smiths' response told Jim nothing about his answer other than it was wrong. As a result, it did not aid in his understanding of similar triangles, nor did it assist other listening students in a similar state of confusion.

Look at the following example!

> Mr. Smith: "What kind of relationship must exist if triangles are similar, Jim?"
> Jim: "Their sides have equal lengths."
> Mr. Smith: "Not quite Jim. If respective sides of two triangles are equal, the triangles would be congruent. Now, what kind of relationship must they have if they're similar, Jim?"

Feedback that is contingent on performance relates the teacher's response to the student's answer.

> Mrs. Locke: "How does the direction of the ocean current off the coast of Chile affect the rainfall in the Chilean desert?"
> Tim: "Since the current comes from the south, the water is cold The air over the water is then more dense than that over the land, so the air that moves landward is warmed rather than cooled, so it doesn't tend to rain. As a result, a desert is there."
> Mrs. Locke: "Yes, good answer."
> Mrs Locke: "Excellent description of the relationship among ocean currents, density, convection, and rainfall. These cause-and-effect relationships are important to understand the weather. Fine answer, Tim!

Mrs. Locke's first response simply acknowledged the student's response with a statement of general praise. By contrast, Mrs. Locke's second response gave the class in general, and Tim in particular, specific information as to why the answer was a good one. If a pattern of using this type of praise is established, students develop an understanding of the criteria for desirable answers, and, as a result, the general quality of answers over time is increased. In addition, logical connections between ideas are reinforced.

Course 2

Generic College Teaching Skills

Lesson Plan X

Objectives:

1. The participants, through discussion will indicate corrective feedback and reinforcements for a class which they taught and taped.
2. The participants will view and discuss data collected by the faculty member in previously taught classes.

Content:

The participants will be given handouts on:

Questions from Observations

Instructor Responses after Student Response

Student Questioning Sequence

Charts Showing Student Participation

Activities:

Discussion to Accomplish Objective 1

Discussion to Accomplish Objective 2

Evaluation:

Participation in Discussions.

Questions from Observations:

What were we talking about yesterday?

What is the first thing to do in Stating the Problem?

What is the dark red cell layer here?

What are our six topics? --Arlene

Are these cells living or dead?

Establish criteria for what?

What were the two obstacles?

What does studying lead to?

Mike--What is characterization?

What is the green color in these cells?

Somebody give me a scenario as to what is going to happen Thursday?

What does rehersal mean?

What are we looking for in Interpersonal Communication within the group?

What are these cells? (points to the slide)

What are the types of plant propagation?

Instructor responses after student response:

Right
OK
Alright
Yep
Yea
Repeated Answer
Good
Exactly
Yea - the relationship - Patricia
Wrong

En Masse question---Patricia Answers---Yes--The Relationship is----
Patricia

Solitary Question to Bruce---Bruce answers---Right
Repeats Answer
Expands

Solitary Question to Patricia---Patricia Answered----Ok
Directed another question to Patricia---No Answer----
Instructor Answered

En Masse question (Statement of the Problem) --- several students answe

What else? --- Kim ---- Answer ---- Right
How else?----- Jenifer -- Answer --- OK
Last Characteristic? --- En Masse --- Beth Answered --- OK

En Masse Question --- Several Students Give an Answer ----- Yep

Student Questioning Sequence

Student asked question (student mumbles)
Instructor responded to student

Same student asked question
Instructor to student

Same student asked question
Instructor to student

Same student asked question
Instructor to student

Same student asked question
Instructor to student

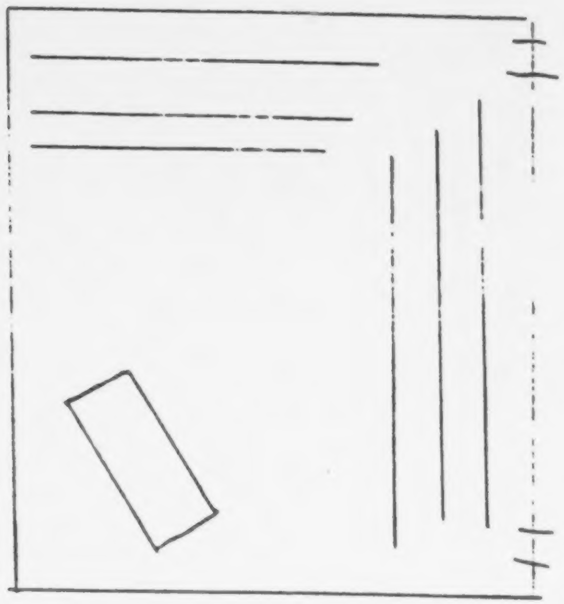
Same student asked question
Instructor to student

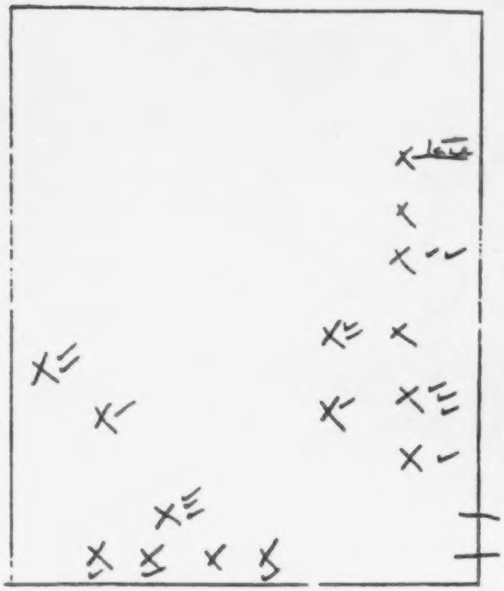
Same student asked question
Instructor to student

Same student asked question
Instructor to student

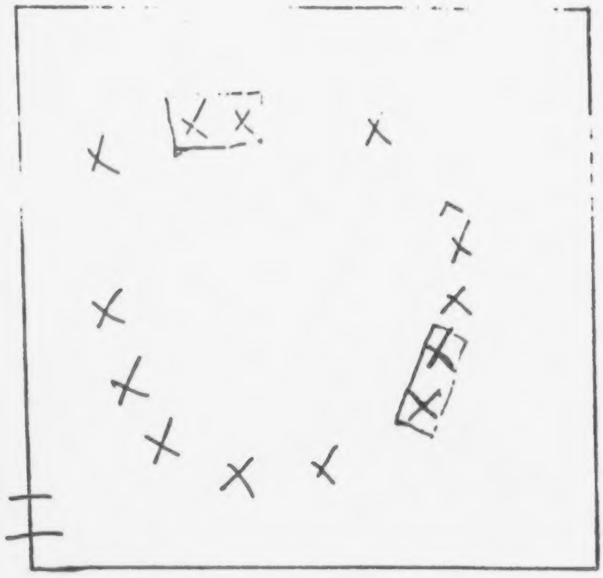
A 3 minute sequence
Information shared between student and instructor only""""""

Student initiates question(student mumbles)
Instructor repeates question
Instructor answers question

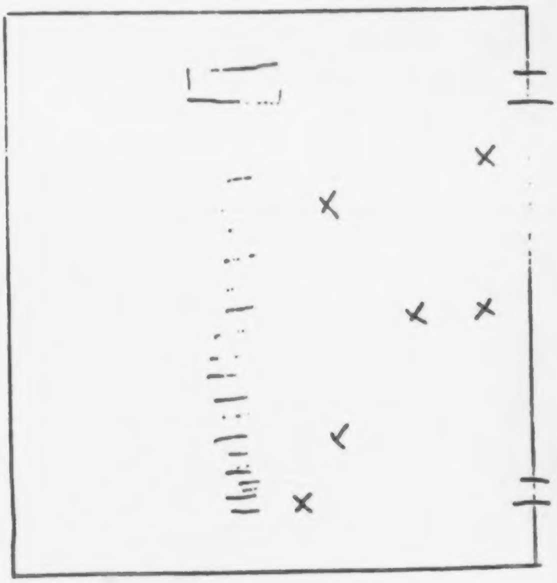




15 Students 9 ♀
11 Participated 6 ♂



7 ♂ 11 W 14 students
7 ♀ 3 B 10 participated



34 students
6 participated

Generic College Teaching Skills

Lesson Plan XI-----Discussion and Role Play Concerning Discussion

Objectives:

The participants will participate in an interactive discussion on the teaching method "Discussion."

The participants will participate in role play activities on incidents concerning "Discussion."

Content:

Video tapes concerning incidents on discussion.

Handout "Using Class Discussion As A Teaching Tool."

Develop participants ability to view tapes and analyze for attributes of the discussion method.

Activities:

Interactive process to discuss the teaching method "Discussion" indicating attributes of the method.

View tapes on incidents concerning discussion and have the participants role play.

Have the participants analyze the role playing situations for attributes of the discussion method.

Evaluation:

Student participation in the discussion.

Student participation in the role playing activities.

USING CLASS DISCUSSION AS A TEACHING TOOL

WHAT IS CLASS DISCUSSION?

Periods of classtime during which the faculty member or a discussion leader guides student discussion of specific course content for learning purposes.

WHY USE IT?

Active participation in good discussion is stimulating, bringing greater ego-involvement in the subject matter through the process. It gives the instructor an opportunity to check student understandings and to note, and sometimes change, their attitudes towards specific content. It can add variety and change-of-pace to the semester.

WHEN TO USE IT?

It is just one teaching tool and therefore need not totally substitute for any other such as lecturing. It is best used after the class has a common knowledge base on a specific area gained through reading and research. It is best for subject matter which involves application, analysis, synthesis, and interpretations of material rather than collections of facts. It is vital to the "Case Method" and many graduate seminars.

HOW DOES THE INSTRUCTOR PREPARE?

In the previous class, talk about student role and preparation. The discussion topic should be roughly outlined and divided into major sub-heads with 3-4 key study questions framed for each section with approximate timing to be used for each section. Students should get this ahead of time.

HOW DO STUDENTS PREPARE?

With common readings, specific research on segments, study of outline given.

HOW TO ARRANGE THE ROOM?

Discussion takes place most effectively when students can be face-to-face, rather than in lecture-style seating. Approximations of a circle provides the best facilitation for participation.

HOW SHOULD THE DISCUSSION BE LED?

Faculty need to understand the neutral-guidance-questioner role of the leader as a facilitator. Care must be taken that lengthy lectures are not given by the faculty member because only brief factual inputs may be needed. Restraint and patience are required rather than domination.

Funk, F. (1987). *Using class discussion as a teaching tool.* Presentation at the Seminar on Teaching, Syracuse University, February.

The leader should:

1. Introduce the topic and its importance, briefly.
2. Mention sub-areas to be covered and timing for each.
3. Give simple ground rules: each should speak up without being called upon, address each other.
4. Get discussion started with a prepared first question: short, stimulating, easy to have an opinion about. *Wait it out*—someone will pick it up.
5. Guide group thinking, impartially and without talking too much yourself, by using questions as your guidance tool to probe, challenge, rephrase their comments. (For question types, see *Chronicle*, 7-25-84)
6. Summarize what has been said periodically then redirect the group to the next topic sub-area with a new question.
7. Be generally accepting; don't constantly make evaluative comments that punish and reward, rather ask examining questions.
8. Encourage general participation by using questions such as: "How do the rest of you feel about this?" or "Are there other reactions?"
9. Keep the discussion "on track". If it seems to be on a tangent, ask the group about the connection to the subject.
10. Listen carefully and ask impromptu probing questions which make the students examine their views carefully, cite evidence for views, examine assumptions, and raise the abstraction level.

HOW SHOULD IT BE ENDED?

1. Allow time at the end for a summary by the leader or the group. Invite the group's agreement on the summary.
2. Give the class a feeling of accomplishment by suggesting that it was a fruitful exchange of important ideas.
3. Suggest next steps or assignment to follow-up.
4. Evaluate results after class for issues ignored or key questions only partially considered.

GENERAL COMMENTS

Good classroom discussion is not a bull-session exchange of ignorance where students just talk in an undirected way and the faculty member just listens. Sloppy thinking, lack of facts or unexamined opinions are not good discussion. On the other hand, a kind of "fishing-game" discussion is also not appropriate. This is where the faculty member conducts discussion (really recitations) until a student stumbles on the "right" or faculty answer.

Critical Moments in College Teaching

Videotapes Produced at Indiana University

Tape #2

I. Students' Personal Concerns and Conflicts

Incident 1: Student's personal problems create academic problems
" 2: Student develops attachment to teacher
" 3: Student stops coming to class; why?
" 4: Teacher-student conflict
" 5: Student protests exam grade

II. Student/Class Concerns and Conflicts

Incident 1: Class is uncooperative with teacher
" 2: Student sleeps in class
" 3: Overly talkative student
" 4: Students whispering in class
" 5: Minority student feels alienated in class
" 6: Student disrupts/clowns in class
" 7: Student needs lots of inclass explanations
" 8: Student introduces lots of personal ideas
" 9: Student-student conflict in discussion

Tape #3

III. Minority Students' Concerns & Conflicts

Incident 1: Student: teacher & text ignores minority students
" 2: Minority student feels alienated in class
" 3: Several students protest class material
" 4: Student protests being spokesperson for all Blacks
" 5: Student protests personal treatment
" 6: Student feels different from other students

IV. Grades: Emphasis and Impact

Incident 1: "I need an A. What do I have to do to get an A?"
" 2: Student feels teacher has a grudge against him.
" 3: Student requests extra work .
" 4: Is attendance required?
" 5: Older student feels grades are unimportant.
" 6: Female student: "What can I do to get an A?"

V. Written Assignments: Emphasis and Impact

Incident 1: Working student needs extension on term paper.
" 2: Medical problem in family; needs more time.
" 3: Minority students: why all low grades?
" 4: How to evaluate unconventional paper
" 5: Student does poor on remedial work
" 6: Possible plagiarism

VI. Exams: Emphasis and Impact

Incident 1: Possible cheating during exam
" 2: Student feels exams were unduly difficult
" 3: Teacher-class conflict on date of exam

Generic College Teaching Skills

Lesson Plan XII-----Inquiry and Notes and Notetaking

Objectives:

The participants will participate in activities to develop a basic knowledge and use of the Inquiry Method.

The students will participate in an interactive discussion on the value of notes and the notetaking process.

Content:

The learning cycle will be used to develop the Inquiry Process. This involves the processes of exploration, invention, and expansion. The concept attainment model will be used as a participatory activity to develop this process.

Information on notes and notetaking will be taken from an article on "Notes and Notetaking" from the Teaching Processor.

Activities:

Student will participate in the activity using the "Concept Attainment Model" to develop an understanding of the Inquiry Process.

Student will participate in an interactive process on "Notes and Notetaking."

Assignment:

Read McKeachie--Chapter 30--Student
Ratings of Faculty.

Evaluation:

Participation in the Concept Attainment Activity and the interactive process on notes and notetaking.

methods of discipline, motivation, and evaluation tailored to produce the behaviors desired? Are methods merely tricks, games, and simulations? Is there a method that characterizes the natural behavior of a child when learning?

Answers to such questions are found in the literature and can be observed in the behaviors of practicing teachers. Each teacher assumes, adopts, adapts, and develops something called "method" (see Chapter 4).

Method or methodology is a descriptive term used to label the teacher's procedures, manipulations, and facilitations of content, control, and learning. The fragmentation of methods into the separate compartments of social studies methods, science methods, language arts methods, and so forth, seems to be lessening. The method or methodology of good teaching is now being viewed as a concomitant element of a good learning environment rather than as the functional means of transmitting content. For example, evaluation procedures are similar whether the context of the evaluation is in reading, arithmetic, or behavior.

Thus, the traditional source of methods, the subject being transmitted, is being replaced or supplemented through an analysis of a supportive learning environment.

Premise. Method, or methodology, is a descriptive term used to label those procedures, techniques, manipulations, and facilitations of content and the learning environment which are performed by teachers. A strategy of curriculum instruction must include an element providing for the creation, selection, and evaluation of methodology.

Traditionally, methods have been derived from those content and control-oriented behaviors which we choose to reinforce. Consequently, methods of reading, mathematics, science, social studies, and so forth, were developed along with presentation procedures (for example, lecture, discussion, demonstration, read-recite-test, and drill). To facilitate the reinforcing of behaviors, methods of rewarding, punishing, restricting, and controlling were developed.

Where and what are the sources of methodology? Is it the content and its topics? Is it information transmission and packaging? Or is it the psychology of behavior modification? A strategy must accommodate the source or sources for the development of methodology.

The strategy proposed here will present "inquiry" as the source of methodology. Inquiry is defined as the processes of exploration, invention, and expansion which describe the learner's interactions within a learning environment. The strategy will refer only to inquiry as method. The other performances by teachers upon the learning environment will be referred to as procedures, techniques, manipulations, and facilitations.

The selection of inquiry as the method of the strategy is not done to devalue the supportive procedures, techniques, manipulations, and facilitations employed by the teacher, but rather to provide a framework from which those teacher performances may be created, selected, or adapted. Inquiry provides a normative description of the processes of interaction employed by learners. Teacher performances are then deployed to fit and further stimulate the inquiry processes of exploration, invention, and expansion.

Exploration. The initial phase of inquiry is the process of exploration. When confronted with an environment, a potential learner begins to sort, identify, and label those properties and characteristics of the environment that are familiar. This is not necessarily a random process because the recognition of what is familiar serves as the catalyst for the organization of the learners' behaviors. Learners must do this for themselves. They cannot be told what is familiar to them. Although the environment can be equipped to facilitate the learner's identification of what is familiar, familiarity is ultimately a function of the learner's developmental level and previous experiences.

An understanding of Piaget helps in equipping the learning environments with objects, events, actions, and data which are appropriate to the developmental level of a learner. The appropriate equipping of the environment maximizes opportunities for the learner during exploration to interact with the familiar, thus increasing the likelihood of that particular learning environment's being perceived and processed by the learner. This is crucial, as successful exploration is a prerequisite to a successful learning cycle. Teacher performances (procedures, techniques, manipulations, and facilitations) can then be selected, designed, and adapted to further promote exploration.

The techniques of demonstration, for example, can be employed as a powerful means for furthering exploratory behaviors. When employed during the exploration phase of inquiry, demonstration would be planned around an equipped environment appropriate to the learner's developmental level. The demonstration would display the properties and characteristics of the objects and actions involved in the learning activity, and discussion during the demonstration would identify them. The discussion during the demonstration would emphasize the observation of the "what's" and "how's," rather than the "why's" of the event or situation. The other information presentation procedures (for example, lecture discussion, reading assignments, and media) would be adapted in similar ways during the exploration phase of inquiry. The manipulations and facilitations of individuals into groups, committees, field trips, or other units would also be adapted during exploration to emphasize the observations and interactions of the learner with the equipped environment.

Invention. The second phase of inquiry is the process of invention. Invention occurs as a result of the learner's explorations. Whatever intake the learner has experienced during the exploration is now reorganized. During invention, the learner clusters and groups the inputs of explorations into a description, an explanation, a classification, or a hypothesis. The power of the invention as a stage for additional learning is dependent upon the exploration phase of inquiry. If the stimuli available and the procedures employed during exploration have been appropriate to the learner's developmental level, then the learner's invention(s) will be self-actualizing.

The performances employed by the teacher during the process of invention are designed to emphasize the learner's choosing, displaying, and prizing of personally derived inventions. These performances may also be utilized to clarify the learner's use of inputs from personal exploration. However, teaching procedures of telling and drilling seem inappropriate during invention because learners possess the classifications, descriptions, explanations, and hypotheses which are fundamental to their present and future learnings. Therefore, the manipulations and facilitations of discussing, questioning, displaying, and acting seem more appropriate. Although the technique of lecturing, for example, can be employed to present the teacher's inventions for the learner's exploration, the learner's inventions must be displayed individually; no one else processes them. The teacher performances during invention stress the learner's output behaviors of speaking and writing, rather than the input behaviors of listening and reading.

The potential for future self-directed behaviors of the learner will nest within the inventions. Learners who are not self-directive have probably been blocked from the development of inventions, for exploration behaviors tend to leave the learner with only what is presently familiar. Inventions guide and direct behaviors in both familiar and new environments. The teacher within the modern elementary school provides time, gentleness, and patience to the learner, and facilitates an environment to honor the learner's inventions.

Expansion. The third phase of inquiry is expansion. Expansion occurs as a result of the learner's inventions, and this process begins when the learner's behaviors are directed toward them. Expansion is the testing of an invention's adequacy. Does it work? Will it account for new objects, actions, events, or situations? Expansion serves to strengthen, establish, modify, or destroy inventions, and even if the expansion systems displaces inventions, they serve powerful and useful functions. For example, the behaviors based upon the testing of an incompleted invention foster modification of invention behaviors, which then become more adequate or comprehensive.

Teacher performances employed during expansion are designed to guide the learners to "find out" the strength, logic, and integrity of their inventions. These teaching behaviors act as a catalyst which supplies the learner with the means for verifying an invention. Within the modern elementary school, the teacher serves as a "means for verification," not as an "external verifier" (for example, "That's right," or "That's wrong"). As with exploration, teacher performances may be employed to support both the input and output behaviors of listening, speaking, reading, and writing. The information-presenting techniques are now modified to provide means, examples, and illustrations to test and find out about an invention. Just as with exploration and invention, the behaviors of expansion must be appropriate for the developmental level of the learner. For example, a preoperational learner who cannot mentally reverse an action cannot use reversal as a means for expansion.

Some incomplete inventions will eventually be confirmed through expansion as a function of a learner's developmental level and experiences. When changes occur in either the developmental level or experiences of the learner, each invention contains the seeds of its own modification. Therefore, the comprehensiveness and adequacy of an expansion system and its impact upon an invention should be perceived as a continuum. A concrete operational learner will abandon the invention and expansion systems of the preoperational learner. Be patient! Each successful inquiry cycle increases the readiness for changes in both the developmental level and experiences of the learner.

SITUATION 5.4 Invite several practicing teachers to explain and/or describe some of their methods. Analyze their descriptions in light of the criteria provided in this section and the appropriate sections from Chapter 4.

Coordinating Phases of Inquiry. Successful inquiry will usually include several cycles through the processes of exploration, invention, and expansion. If affective blocks do not occur when an expansion system displaces an invention, the learner will return to exploration, recreate an invention, and reapply an expansion system. Piaget used the term "disequilibrium" for this recycling of an unsupported invention. He further stated that each equilibrium (an affirmed invention) contains the potential seeds for future disequilibrium. In order for recycling and its companion "disequilibrium" to occur, the manipulations and facilitations must be very supportive of the need for affective reinforcement. A more comprehensive discussion of Piaget was given in Chapter 1.

A potential source, then, for the reinforcement procedures of classroom control is the inquiry cycle. As learners are directed through inquiry, the intrinsic energy available for interacting with the learning environment is magnified, thereby reducing somewhat both the energy available and the learner's need to engage in other behaviors. According to the proposed strategy, the reward and punishment systems of a classroom would be judged in terms of its reinforcement of the learners as they experience inquiry (see Fig. 5.4).

Inquiry as an element within the strategy provides a meeting ground for what is presently identified as methods of reading, arithmetic, social studies, and other subjects. The content topics of all these areas of study can be appropriate to inquiry when selected by structure, the first element of the strategy. Therefore, inquiry can be the method which unites the behaviors of learning with the vehicles of content drawn from reading, arithmetic, social studies, and so on. More specific examples of this uniting function of inquiry will be provided in Part II.

Inquiry as an element of the strategy also provides a foundation for the selection of teacher performances. This foundation enables a teacher to answer, for example, the question: "Is the procedure of drill good or bad?" Without a foundation—in this case, inquiry—it has been suggested that the question has no answer. With the foundation of inquiry, drill can be evaluated as a technique useful for establishing at a high efficiency level those inventions affirmed through expansion. Drill is useless during exploration or expansion. Another nonquestion, "Is media good or bad?" has no answer without a foundation (inquiry). Media can be adopted to serve exploration or discovery. The objects, actions, events, and situations of the media are to be appropriate to the behaviors of exploration or expansion. Without additional adaptions, media adapted for exploration would not serve expansion well.

Managing the Learning Environment

The following six elements are viewed by the proposed strategy as central to the management of a learning environment: (1) questions; (2) cues; (3) participation; (4) corrective feedback; (5) reinforcement; and (6) time on task. These six are prime

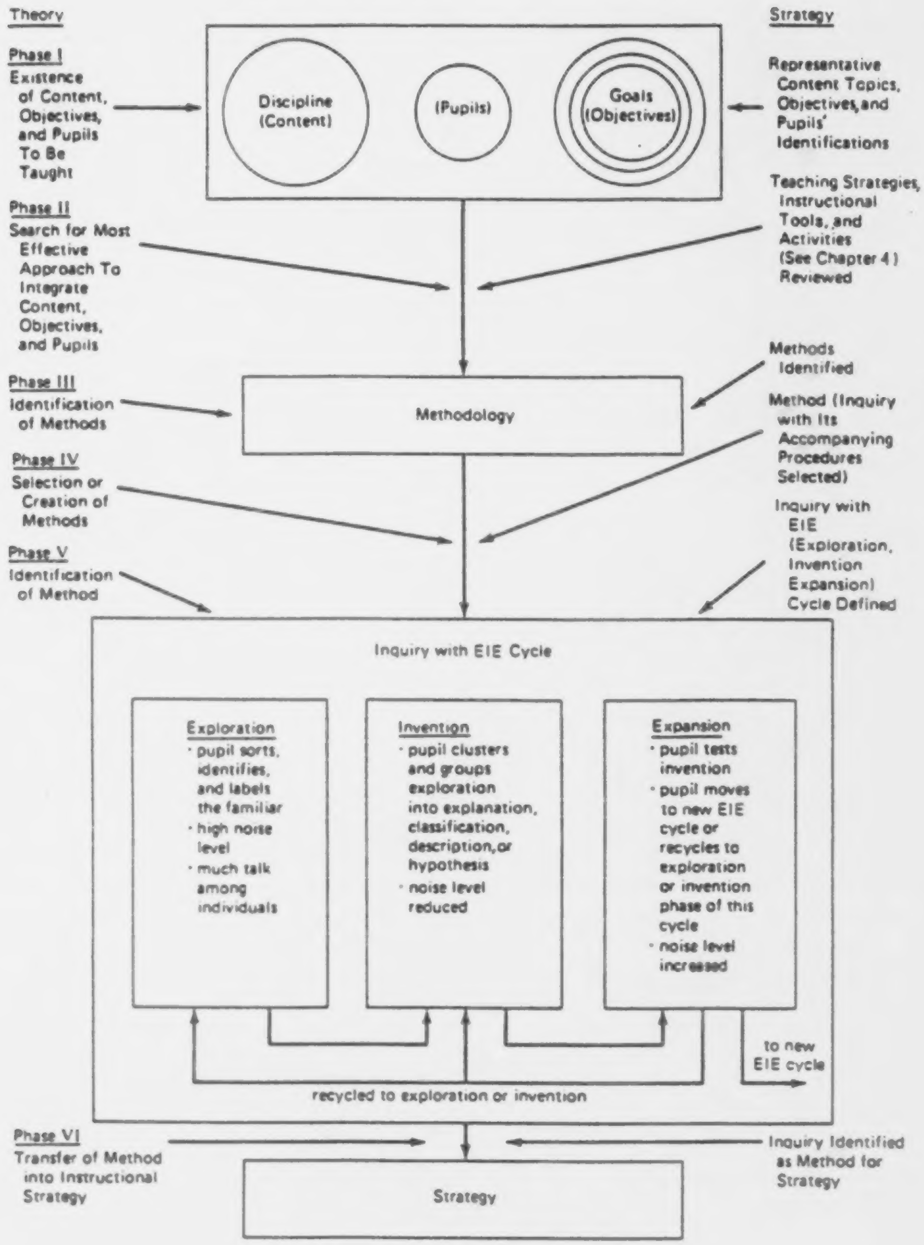

Theory
Phase I
Existence of Content, Objectives, and Pupils To Be Taught
Phase II
Search for Most Effective Approach To Integrate Content, Objectives, and Pupils
Phase III
Identification of Methods
Phase IV
Selection or Creation of Methods
Phase V
Identification of Method
Strategy
Representative Content Topics, Objectives, and Pupils' Identifications
Teaching Strategies, Instructional Tools, and Activities (See Chapter 4) Reviewed
Methods Identified
Method (Inquiry with Its Accompanying Procedures Selected)
Inquiry with EIE (Exploration, Invention Expansion) Cycle Defined
Discipline (Content)
(Pupils)
Goals (Objectives)
Methodology
Inquiry with EIE Cycle
Exploration
· pupil sorts, identifies, and labels the familiar
· high noise level
· much talk among individuals
Invention
· pupil clusters and groups exploration into explanation, classification, description, or hypothesis
· noise level reduced
Expansion
· pupil tests invention
· pupil moves to new EIE cycle or recycles to exploration or invention phase of this cycle
· noise level increased
to new EIE cycle
recycled to exploration or invention
Phase VI
Transfer of Method into Instructional Strategy
Inquiry Identified as Method for Strategy
Strategy

Figure 5.4 The inquiry cycle. (For strategy, see Figure 5.7, p. 194.)

Course 2

Generic College Teaching Skills:

Lesson Plan XIII

Objectives:

The students will participate in an interactive discussion on "Review Sessions."

The participants, through discussion will indicate (Question Element Sequence) question distribution load, wait time and teacher response, and student participation from data which the faculty member collected from a class observed. (That the participants Taught)

The participations will develop an evaluation form to give to the students in the classes they teach.

Content:

Information on "Review Sessions" will be taken from an article on "Exam Review Sessions" from the Teaching Professor.

Handout on data summary from observation of the participants classes.

Handout of University Evaluation Forms.

Activities:

Student will participate in an interactive process on "Exam Review Sessions."

Discussion on Data Summary to accomplish objective 2.

Through an interactive process the participants will develop an evaluation form of questions to illicit information which does not appear on standard evaluation forms from the students in classes which they teach.

Assignment:

Administer the evaluation form to the students in their classes and summarize the information.

Evaluation:

Participation in the interactive process on Exam Review Sessions and the discussion on Data Summary.

Participation and the development of an Evaluation form.

The
TEACHING
PROFESSOR

Volume 2, Number 11 *November, 1988*

Exam Review Sessions

"Are you going to spend time reviewing for the exam?" students frequently query instructors. Sometimes the question is more blatant: "Are you going over what's going to be on the exam?" Students do not expect to be told what the exam items are, but they're hoping to discover as many details as they can possibly squeeze out of the instructor.

This kind of student pressure causes many faculty members to wonder about the value and purpose of exam review sessions. Should they be incorporated into already-crowded course calendars? Do students perform better on exams if instructors include review sessions? More important, do review sessions contribute to the long-term retention of course content? Do sessions like these help students better cope with exam anxiety? How can the sessions be formatted? What about mechanics – like time, attendance, participation of TAs, and so on?

The case for offering review sessions rests on two principal arguments: The sessions do contribute to the learning potential of exams, and they do help students cope with exam anxiety. In the first case, review sessions help students better learn the content by creating accurate expectations about how knowledge of the content will need to be demonstrated, and how detailed that knowledge needs to be. The sessions can be designed to give students an opportunity to practice the skills needed on the exam.

Helping students cope with exam anxiety is equally important. Some students feel so much anxiety that their performance on the exam suffers. They know the content, they can solve the problems, but the pressure of the situation prevents them from demonstrating that knowledge. Instructors point out that students must learn to cope with anxiety, to perform under pressure, but few can point to jobs in the "real" world that require students to perform under college examination conditions. The process of reviewing under an instructor's guidance, with his encouragement, bolsters students' confidence. Information about exam logistics, like the number and format of the questions, helps them relax and concentrate on content.

As far as empirical evidence is concerned, the effects of review sessions on learning outcomes does not rank as one of the well-researched topics in higher education. However, instructors who monitor student participation in review sessions and scores on exams report a positive correlation between the two.

In fact, one faculty member we know significantly increases attendance at the review session for the second exam by posting on the board the average score of students who attended the first exam review next to the average for those who didn't. He reports the average of those attending has never failed to be higher. He does grudgingly admit that the difference may not result from the review session as much as from student ability (we all know who attends voluntary review sessions), but even so the difference serves to motivate a number of students, and that's his objective.

Ways to Go

As for format, instructors use a variety of them, but consider these three fairly common approaches. The first might be called the open question period. Here the instructor simply makes himself available to the students; they set the agenda. They decide what questions to ask, what problems they'd like solved, or what parts of the reading they want reviewed. If they only ask questions for five minutes, so be it, and the review session ends.

This approach does give students the opportunity to clarify those parts of the content they don't understand. However, it fails to establish content priorities or focus. Frequently this approach lends itself to the 20-questions routine, with students trying to weasel as much information from faculty as possible. The learning potential of the session diminishes to the degree students get into the mode of asking, "Do we have to know *x* for the exam?" "Will there be questions on *x*?" Some instructors still try to provide students an open questioning arena, but focus questions, possibly even recasting some, by having students submit them prior to the review. Discussion of those questions takes precedence over questions students bring to, or that arise during, the review session itself.

Questions Observed in Students Classes:

What does primary do? Lance

Mike, Can you help him?
Rich, Redeem Yourself
Oh!! Rich Wrong Guess

In Eastern U.S., What Vegetative Biome will you find?

Yes

What about center of the U.S.
Yes

Whats responsible for north south trend? Kevin
Yes

Why do we see such a complex vegetation in that area.
(Talking about Cent Am)
Right-Jerry

Anybody Know what Primary sector is? (Spontaneous)

What are two extractors?

Somebody geve me a definition or something about Entrepreneur.
Anybody want to add to that?

Anybody know what bauxite is?
Aluminum Ore

What does the U.S. predominately depend on for Power? (Spontaneous)
Repeated answers

In order to maximize profit -minimize cost, where would an
Orange Juice factory be located---Florida or New York?

Can you think of any other pool of Professionals
Student says--Air Traffic Controllers
How about Pilots?

Students put on scene:

Asked for Critique
Todd Responded
OK Tod very good comment

Laura what do you think?

David What do you think?
Great comment

What are three types of Memory?
Instructor answered the question

What are some implications of Memory?
Student responds--

What are other Implications?
No response

What about other strategies?
Student answers
Thats exactly right

Any other Implications?
Student answers

Have you ever seen Pneumonic Technique?
No response

Any other techniques to improve memory?
No response

Do you remember chunking?

What happens if reherse message--would you remember it better or not?
Student says yes.

What would happen if suppressed fires in grasslands -- Kevin
Right

What happens when suppress fires in Pine area?
Student answers
Uh Huh

Can anybody give me a natural cause of fires in the Ecosystem? Jerry
Student answers

Any other reasons for pattern on N.A. Continent
Student answers
Jerry - right

Who is ruler of Libya?

Is he a terriost?

Ruler of Egypt here two weeks ago?

Where did Bush take him?

80-6-110

STUDENT EVALUATION

1. Did this course fulfill your expectations? __________
   Why?

2. Would you recommend that other students take this course?

3. List any distracting mannerisms displayed by your instructor.

4. Comment on the amount of material covered in a single class period.

5. What aspects of this course were most valuable an what were least valuable?

6. Were the major assignments explained adequately?
   ___Always ____Often ___Sometimes ___Seldom ___Never

~~7.~~ What do you think the policy should be regarding attendance and tardiness for this class?

7, Does the instructor relate the subject matter to students interest and experiences.

8. What additional topics would you like to see included in this course?

Course 2

Generic College Teaching Skills

Lesson Plan XIV

Objectives:

The participants will participate in a discussion to reveal the information gathered from the evaluations which they developed and administered to their students.

The participants will participate in an interactive process concerning "Student Ratings of Faculty" from Chapter 30 of McKeachie.

The participants will evaluate Course 2 (Generic College Teaching Skills).

Content:

Interactive Process on Student Ratings of Faculty:
 Do Student Ratings Measure Teaching Effectiveness?
 What Factors Influence Student Ratings of Teaching?
 Reliability of Student Ratings.

Activities:

Discussion on information gathered from the evaluations which they developed and administered to their students.

Interactive process concerning "Student Ratings of Faculty".

Evaluation of Course 2.

Evaluation:

Participation in Discussion, Interactive Process and evaluation of Course 2.

A Teacher Behavior Inventory
is Completed on Each Student
by the Grant Faculty.

This is returned to the
Student During a Summative
Conference.

TEACHER BEHAVIORS INVENTORY

Instructions

In this inventory you are asked to assess specific classroom behaviors. This information is for the purposes of instructional analysis and improvement. Please try to be both thoughtful and candid in your responses so as to maximize the value of feedback.

Your judgments should reflect that type of teaching you think is best for this particular course. Try to assess each behavior independently rather than letting your overall impression determine each individual rating.

Each section of the inventory begins with a definition of the category of teaching to be assessed in that section. In Scale 1, for each specific teaching behavior, please indicate the observed frequency of occurrence. For Scale II please indicate your judgement concerning the appropriateness of the frequency of occurrence for the observed lesson.

Scale 1
1 = not observed
2 = rarely
3 = sometimes
4 = often
5 = almost always

Scale 2
1 = increase
2 = make no change
3 = decrease

Clarity: method used to explain or clarify concepts and principles	Scale I	Scale II
Provides several examples of each concept	1 2 3 4 5	1 2 3
Uses concrete examples to explain and illustrate concepts and principles	1 2 3 4 5	1 2 3
Fails to define new or unfamiliar terms	1 2 3 4 5	1 2 3
Repeats difficult ideas several times	1 2 3 4 5	1 2 3
Stresses most important points by pausing, speaking slowly, raising voice and so on	1 2 3 4 5	1 2 3
Uses graphs or diagrams to facilitate explanation	1 2 3 4 5	1 2 3
Points out practical applications of concepts	1 2 3 4 5	1 2 3
Answers Students' questions thoroughly	1 2 3 4 5	1 2 3
Suggests ways of memorizing complicated ideas	1 2 3 4 5	1 2 3
Writes key terms on chalkboard or overhead screen	1 2 3 4 5	1 2 3
Explains subject matter in familiar language	1 2 3 4 5	1 2 3
Enthusiasm: use of non-verbal behavior to solicit student attention and interest		
Speaks in dramatic or expressive way	1 2 3 4 5	1 2 3
Moves about while lecturing	1 2 3 4 5	1 2 3
Gestures with hands or arms	1 2 3 4 5	1 2 3
Exhibits facial gestures or expressions	1 2 3 4 5	1 2 3
Avoids eye contact with students	1 2 3 4 5	1 2 3
Walks up aisles beside students	1 2 3 4 5	1 2 3
Gestures with head or body	1 2 3 4 5	1 2 3
Tells jokes or humorous anecdotes	1 2 3 4 5	1 2 3
Reads lecture verbatim from prepared notes or text	1 2 3 4 5	1 2 3
Smiles or laughs while teaching	1 2 3 4 5	1 2 3
Shows distracting mannerisms	1 2 3 4 5	1 2 3
Interaction: techniques used to foster students' class participation		
Encourages students' questions and comments during lectures	1 2 3 4 5	1 2 3
Criticizes students when they make errors	1 2 3 4 5	1 2 3
Praises students for good ideas	1 2 3 4 5	1 2 3
Provides corrective feedback	1 2 3 4 5	1 2 3
Asks questions of individual students	1 2 3 4 5	1 2 3
Asks questions of class as a whole	1 2 3 4 5	1 2 3
Incorporates students' ideas into lecture	1 2 3 4 5	1 2 3

Interaction: (continued)		
Presents challenging, thought-provoking ideas	1 2 3 4 5	1 2 3
Uses a variety of media and activities in class	1 2 3 4 5	1 2 3
Asks rhetorical questions	1 2 3 4 5	1 2 3
Organization: ways of organizing or structuring subject matter		
Uses headings or subheadings to organize lectures	1 2 3 4 5	1 2 3
Puts outline of lecture on chalkboard or overhead screen	1 2 3 4 5	1 2 3
Clearly indicates transition from one topic to the next	1 2 3 4 5	1 2 3
Gives preliminary overview of lecture at beginning of class	1 2 3 4 5	1 2 3
Explains how each topic fits into the course as a whole	1 2 3 4 5	1 2 3
Begins class with a review of topics covered last time	1 2 3 4 5	1 2 3
Periodically summarizes points previously made	1 2 3 4 5	1 2 3
Pacing: rate of information presentation, efficient use of time		
Dwells excessively on obvious points	1 2 3 4 5	1 2 3
Digresses from major theme of lecture	1 2 3 4 5	1 2 3
Covers very little material in class sessions	1 2 3 4 5	1 2 3
Checks if students understand before proceeding to next topic	1 2 3 4 5	1 2 3
Sticks to the point in answering students' questions	1 2 3 4 5	1 2 3
Disclosure: explicitness concerning course requirements and grading criteria		
Advises students as to how to prepare for tests or exams	1 2 3 4 5	1 2 3
Provides sample exam questions	1 2 3 4 5	1 2 3
Tells students exactly what is expected of them on tests, essays or assignments	1 2 3 4 5	1 2 3
States objectives of each lecture	1 2 3 4 5	1 2 3
Reminds students of test dates or assignment deadlines	1 2 3 4 5	1 2 3
States objectives of course as a whole	1 2 3 4 5	1 2 3
Speech: characteristics of voice relevant to classroom teaching		
Stutters, mumbles or slurs words	1 2 3 4 5	1 2 3
Speaks at appropriate volume	1 2 3 4 5	1 2 3
Speaks clearly	1 2 3 4 5	1 2 3
Speaks at appropriate pace	1 2 3 4 5	1 2 3
Says "um", "ah" or other habit words	1 2 3 4 5	1 2 3
Voice lacks proper modulation (speaks in monotone)	1 2 3 4 5	1 2 3
Rapport: quality of interpersonal relations between teacher and students		
Addresses individual students by name	1 2 3 4 5	1 2 3
Announces availability for consultation outside of class	1 2 3 4 5	1 2 3
Offers to help students with problems	1 2 3 4 5	1 2 3
Shows tolerance of other points of view	1 2 3 4 5	1 2 3
Talks with students before or after class	1 2 3 4 5	1 2 3

Course III

Culture of the Academic Enterprise

Course Description:

Culture of the Academic Enterprise is the third of a three course sequence during which the participants will focus on professional principles and practices relevant to professoring in the various content areas. This course will be taught by faculty coordinators who represent the content area of the doctoral candidates.

Goal 1:

This course will contribute to the synthesis of the participants philosophy of teaching, service, and research.

Objective:

The participants, through attendance and participation, will develop within their patterns of thinking philosophies within the areas of teaching, service, and research.

Goal 2:

The participants will develop an understanding of the various processes of the University system.

Objective:

The participants will identify various processes of the university system and develop the distinguishing characteristics of each.

Content Topics:

a. Advising Processes
b. University Organizational Processes
c. Tenure Processes
d. Processes of Academic Freedom
e. Processes of gaining a position in the University
f. Processes of Publishing, Research, and Grantsmanship
g. Professional service processes internal and external to the University.

Goal 3:

The participants will develop an understanding of the various ethical and moral issues within the University setting.

Objective:

The participants will identify the various ethical and moral issues within the University setting and develop distinguishing characteristics of each.

Content Topics:

a. Ethnicity
b. Sexual Harassment
c. Ethical Issues
d. Professionalism
e. Conflict of Interest
f. Bias Teaching (Explicit and Implicit)
g. Animal Rights
h. Human Subjects Rights
i. Confidentiality

Course Evaluation:

The grade to be reported at the end of this course will be an "S" or "U". The criteria to be used for evaluation will be determined by the Faculty Coordinators directing the work.

Schedule of Events
Course III
Culture of the Academic Enterprise

Week 1

Group Meeting

Week 2

Meet with Faculty Coordinators

Content Topics:

a. Advising Processes
b. University Organizational Processes

Week 3

Group Meeting

Discussion of Content Topics

a. Advising Processes
b. University Organizational Processes

Week 4

Meet with Faculty Coordinators

Content Topics:

a. Tenure Processes
b. Processes of Academic Freedom

Week 5

Group Meeting

Content Topics:

a. Tenure Processes
b. Processes of Academic Freedom

Week 6

Meet With Faculty Coordinators

Content Topics:

a. Processes of Gaining a Position in the University
b. Processes of Publishing, Research and Grantsmanship
c. Professional Service Processes External and Internal to the University

Week 7

Group Meeting

Content Topics:

a. Processes of Gaining a Position in the University
b. Processes of Publishing, Research and Grantsmanship
c. Professional Service Processes External and Internal to the University

Week 8

Meet with Faculty Coordinators

Content Topics:

a. Ethnicity
b. Sexual Harrassment

Week 9

Group Meeting

Content Topics:

a. Ethnicity
b. Sexual Harrassment

Week 10

Meet with Faculty Coordinators

Content Topics:

a. Professionalism
b. Conflict of Interest

Week 11

Group Meeting

Content Topics:

a. Professionalism
b. Conflict of Interest

Week 12

Meet with Faculty Coordinators

Content Topics:

a. Bias Teaching (Explicit and Implicit)
b. Expectation of the Applicant and the Institution

Week 13

Group Meeting

Content Topics:

a. Bias Teaching (Explicit and Implicit)
b. Expectation of the Applicant and the Institution

Week 14

Meet with Faculty Coordinators

Content Topics:

a. Confidentiality
b. Animal Rights
c. Human Subject Rights

Week 15

Group Meeting

Content Topics:

a. Confidentiality
b. Animal Rights
c. Human Subject Rights

Selected Recources
Used In
Course III

(Arranged in no particular order)

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Used
as a Resource
for Course
3

News Summary

Articles on inside pages

Physicists now believe the material universe is composed of three fundamental types of matter: Page A4.

Room-temperature fusion has received a reprieve from a panel of scientists who say new experiments warrant further research: Page A4.

Boston U.'s president, in a new book, offers solutions to the country's problems: Page A13.

Educating teachers on California State U. campuses is everyone's job, administrators there say: Page A13.

Federal aid programs for colleges face a two-year review as Congress prepares to reauthorize the Higher Education Act of [illegible]: Page A19.

Vietnam Seeks to End Its Academic Isolation From Western World

By JONATHAN M. MOSES

HO CHI MINH CITY, VIETNAM

Vietnam is eager to renew academic ties with the West.

Cut off from the United States since 1975, when Americans evacuated this city—then known as Saigon—in the face of advancing North Vietnamese troops, educators here say they are now looking to develop Western contacts as part of a year-old campaign to jump-start their country's moribund economy.

"We will go anywhere—France, the U.S., Japan"—to make those connections, said Tran Tiung Hau, chairman of the economics department at Ho Chi Minh City University, in a recent interview.

Scholars here noted that a lack of funds made such contacts impossible without foreign sponsorship. Efforts to create aca-

State Governments to Spend $39.3-Billion on Colleges and Universities in 1989-90

Farm-belt campuses fare well; Northeast prepares for austerity

By SCOTT JASCHIK

State governments will spend $39.3-billion on higher education this year, an increase of 14.3 per cent over what they spent two years ago.

In general, farm-belt states are providing generous increases for higher education this year, while states in the Northeast are more frugal than they were two years ago, according to a study compiled by the Center for Higher Education at Illinois State University. In the study, state appropriations are compared with figures from two years earlier, rather than with those from the previous year, to limit the influence of short-term fluctuations.

The overall increase is nearly two percentage points above the two-year rise last year.

The data are known widely as "the Chambers numbers," after M. M. Chambers, who died in 1985. Mr. Chambers, a professor at Illinois State, started collecting the information in 1958. Since then, the annual study has become the authoritative compendium of state support for colleges and universities.

Economies Rebound in Oil States

Budget Cuts, Scandals Leave Mass. Colleges Facing Severe Crisis

By GOLDIE BLUMENSTYK

BOSTON

B[illegible]t cuts, financial imbroglios, patron[illegible] appointments, turf wars, and a sex

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problems require a rele-
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Erickson, S. C.

CHAPTER EIGHT

Teacher as Counselor and Mentor

> Liking students, respecting them, deriving enjoyment from teaching them was the first of my cardinal rules for good teaching.
> —Professor of economics

> Socrates: Well, my art of midwifery is in most respects like theirs; but differs in that . . . I look after their souls when they are in labor, and not after their bodies.
> —Plato, *Theaetetus*

The teacher is not a therapist and the classroom is not a clinic, but turning to the teacher is an early option when a student wonders what went wrong and what to do about it. Teachers appreciate the anxieties, confusions, conflicts, and tensions generated in the academic pressure chamber and are useful sources of information about course routes and career alternatives. Students seek out their teachers as persons whose judgment is respected and whose confidence is trusted as counselor, mentor, and friend.

The Teacher as Counselor and Adviser

On occasion, nearly every student looks for counsel about what is first and second and third on a scale of values. Conversations that penetrate (or skim) personal turmoils have always been part of the academic scene, and professionally staffed counseling centers are well established on most campuses. Learning how to handle worries and frustration is part of a student's education and, short of therapeutic intervention, teachers are helpful in guiding students through their personal curriculum.

Successful counseling amounts to an honest and friendly interchange of opinions and feelings—cognition and motivation again. Certain safeguards are in order because a student's self-esteem is too precious to be casually managed, manipulated, or massaged. In the role of counselor, the teacher is going beyond knowledge of his subject specialty and will benefit from observations by those more experienced in understanding the dynamics of an individual seeking help and support. Therapeutic specialists usually affirm that an empathetic attitude is basic:

> Good counseling . . . is reflected in the counselor's respect for the student's individuality, his special needs, and his right to accept or reject the information, advice, or assistance being offered. It rests in the counselor's ability to refrain from pushing the student into a preconceived mold or plan of action. It rests in the sensitivity that stems from being tuned in to the feelings and concerns often underlying the student's words and ideas. Such feelings as boredom, concern, anxiety, fear, and sadness are often revealed through subtle voice qualities, postures, and movements. Above all, good counseling is depending on the counselor's ability to enjoy and care for the students coming to him" [Bordin, 1969, p. 6].

Prior to entering this intimate relationship, certain practical considerations must be taken into account. Clearly, effective counseling is difficult when the teacher is the person who defines what the student is expected to learn and who evaluates the level of achievement. Nevertheless, the first concern is the well-being of the student as a self-sufficient individual rather than as a competitor for grades. This distinction is a categorical imperative. A second consideration is to recognize that symptoms may not be what they seem. It is precarious to project our own thoughts and feelings into the personal dynamics of someone leaning on us. Experienced counselors guard against such intrusion, and it is wise to refer a thoroughly alienated, frustrated, or emotionally distraught student to a counseling center or a health clinic to talk with a professional specialist. The following quotation is taken from a report by such a person commenting to his faculty colleagues about a teacher's responsibility as a counselor. Korn (1981) is the director of counseling services for the University of Michigan's Office of Student Services.

> There must be mutual understanding that the individuals involved have a right and an obligation to define the limits of the relationships. Both persons must have the sense of freedom to say "that's enough, thank you." It is unfair, and antithetical to promoting individuality, to encourage a student to expect something in a relationship which cannot be delivered because of limitations of time, role, or competence. I am describing a rather delicate balance which encourages a sense of trust on one hand and is explicit about limits on the other hand.
>
> Most students can make some kind of initial statement of what they are looking for, but where the student seems confused, frightened, or inarticulate, it is necessary to reassure this person that you recognize his or her conflicting state of mind.
>
> The attitude being suggested here is one of actively listening. This has a rather special meaning because it is one of the best ways for obtaining a

sense of the uniqueness of the other person. It involves the formulation of tentative hypotheses about what is important to the other person and about the major premises of the individual's belief system. The essence of this approach is to generate a hypothesis and test it out. For example, in response to a student's statement of the problem, you might say:

- You seem upset.
- Getting a good grade must be very important to you.
- Not knowing what you want to major in can be disturbing.
- Being bored could make you feel out of place.

In each of these examples the intent of the response is twofold: (1) to determine if your perception of the student's experience is accurate; (2) to focus attention on the student's need to further explore the significance of what he or she is explaining (to help articulate awareness).

Another dimension of this exploration phase is to determine how the student is conceptualizing problems. One must tentatively explore the student's beliefs about who, what, and why:

(a) Does the student need information about a course, an academic program, a possible career?

(b) Does the student need an opportunity to explore new ideas and their relationship to firmly established prior beliefs?

(c) Is there a need to talk openly about boredom and lack of motivation?

(d) Does the student need a chance to sort out major confusions about himself or herself or about a relationship with someone else?

At the same time you are deciding on any combination of these or other problems, it is necessary to decide who is the appropriate person to take the next step with the student. If you and the

> student are interested, you may arrange more time for dialogue. The more difficult circumstances occur when you are not interested, perhaps due to time constraints or the feeling that you cannot help the student. Making a smooth referral once again requires careful attention to individual differences. Some students recognize and appreciate the complexity of the university and thus are happy to be informed about other sources of help on campus. Others are suspicious, resentful, or afraid to approach somebody else with a problem or question. It is necessary to acknowledge whatever the student is feeling and then to be clear and firm about the desirability of the student seeking out further assistance. This requires that you be informed about other sources of help and that you indicate to the student that you would like to know if the referral was helpful [Korn, 1981, p. 5].

Academic advising, like counseling, considers students one by one. The exchange of information dominates these conversations, but matters of motivation and aspirations are very much in the picture. The aim is to help an individual plan and carry out a course of study appropriate to a particular pattern of interests, abilities, and ambitions. Teachers make good advisers because they understand the curricular complexities en route to graduation or in preparation for postgraduate work. Academic advising requires homework to know the intricacies of intra- and interdepartmental rules and regulations and to recognize and relate different courses to a student's future. The advisory relationship matches the resources and requirements of the school with the resources and the aims of the individual student. The director of the University of Michigan's advisement program in the liberal arts college pointed to certain considerations about advising:

> Advisers need to encourage students to think about why they are in school. In this sense, the ad-

> viser is an educator. Too many students select courses term after term without questioning or thinking more broadly about what they might obtain from their education. A few perceptive questions or insightful comments can cause students to rethink their goals. . . . The successful academic adviser offers students a feeling of personal concern within the institution, provides accurate information—which often includes referrals to other campus agencies—and attempts to help students discover the best possible fit of their aspirations with the values of a liberal education [Judge, 1981, p. 6].

Mentor to Students

Certain groups of students are clustered for special attention. Of these, honors students are the favored group for mentors' attention; they learn quickly, ask challenging questions, and reflect faculty values. It is rewarding to support these students because it has long been observed that any instructional program involving bright and motivated students is doomed to succeed. This section, however, will examine acting as a mentor to those students who have problems in the classroom, those who have not yet acquired the motivation or the techniques for comprehending quickly what textbooks and teachers have to say.

Most schools are taking steps to adapt instruction more effectively for the underprepared student. As Cross (1982-1983, p. 1) stated so well, "There is no equality until each student is offered the right to do his or her best. Sad to say, we have not been offering that right to either high-achieving or low-achieving students. . . . I am convinced that we can return pride in achievement to education without compromising the gains that we have made with respect to (equal) access. But to do so will require major changes in the traditional practices of education—changes in our most basic premises about teaching and learning." The mentor's effort is directed to factors that can be changed, such as motivation and study skills. Slow students have not had especially pleasant experiences with formal education and face the frustration of, once again, not doing as well as they would like. Discouragement comes quickly, and they need mentors who can counter defensive maneuvering, a lack of interest, self-defeating attitudes, and the weak study habits acquired in earlier school years. Few college teachers have had experiences corresponding to those of a student coming in for help and worried about not being able to make it. Being a successful mentor for such students requires, as does counseling, empathy and understanding of the dominant role of affective factors in a student's schoolwork.

Student Underachievers. The academic performance of some students is noticeably below what might be expected in light of their scholastic aptitude scores or earlier achievements in high school. The freshman year is often a difficult time for students unaccustomed to high performance demands. For reasons other than lack of aptitude or not knowing how to study, they have trouble with core curricular subjects such as mathematics or with the foreign language requirement. Instruction may be satisfactory, but it falls on deaf ears—motivation is weak. Variations of the boredom theme are frequently expressed. Classes limited to technical procedures, specific applications, or taxonomic ordering are, to some students, less stimulating than courses immersed in theory, conceptual analysis, problem solving, and the value implications of issues that have challenged the best minds in history. The values of a liberal education do not always sing out by themselves, and the social, educational, and professional values of the teacher-mentor influence the student's course of action. Motivational redirection is accomplished by both precept and example.

Variations of the following question are heard over and over again when teachers talk about classroom problems: "How do I motivate the bottom third of my class?" In this instance, the motivation factor may be overextended because the trouble may be inadequate sets of study skills.

Basic Skills for Study. The first diagnostic appraisal following admission to college should be for competence in reading. Even fairly good readers find their skill inadequate when faced with the unrelenting pressures of long reading assignments. Poor reading is an obvious handicap that can catalyze, if not ensure, academic failure. Slow readers cannot move freely among words seeking the thread of an idea. Increasing speed, however, is not equivalent to increasing comprehension, although it may lead in that direction. Good measures of reading skill are available, and there are few excuses for starting students through a reading-dominated curriculum without making the effort to correct reading deficiencies.

In the late 1930s, many American colleges and universities established remedial reading programs for their students. Broader supporting services were eventually developed as faculties realized the importance of the larger set of study skills. Successful work as a college student requires a complex meld, a combination of reading with writing, writing with thinking, taking notes from lectures and from reference materials, preparing for exams, planning and writing term papers, solving sets of problems, carrying out special projects, and scheduling time for study and for play. In advising or instructing students along these lines, one must give careful attention to motivation because the lack of sustained interest is the most common single reason for failure to complete a study-skills program. Fortunately, the confidence gained by students who see improvement in their study habits enhances their motivation and thus their perseverance. Participation in a study-skills program is an example of a justified self-fulfilling effort.

The ability to express oneself with the written word—to describe events and to analyze abstract relationships—is a distinctive and valued talent. Writing a book report, or poetry, and everything in between can be improved with supervised practice, and colleges are finding that "Freshman English 101" is not enough for many students. Comprehensive programs of diagnosis, training, and evaluation are being developed to improve the ability of students to write (Bergman, Rubenstein, and Dunn, 1982). A number of schools are implementing a new academic requirement: The writing competence of each student is certified by teachers in, for example, an advanced course in a student's area of concentration. Learning how to write requires practice in writing about whatever variety of things students study in their courses. Insofar as they are qualified to do so, teachers in all departments should assume more responsibility for the quality of written discourse. This added dimension to the instructional task may call for institutional support plus more extensive research analyses of the basic skill of writing (Frase, 1982). Consultation, workshops, and printed information might examine appropriate kinds of writing assignments and how to intervene as an evaluator of a paper's organization and style. It is appropriate, for example, that students write papers aimed at an audience beyond the academic setting, for example, chemistry for cooks, history for voters, and manuals for new owners of home computers.

For better or for worse, and for both teacher and student, performance on examinations is the dominant measure of a student's academic competence. The following chapter examines testing as a measure of good teaching, but the matter is here considered one of the basic study skills. When studying for an examination, the student is trying to anticipate the mental gymnastics of the teacher searching for good questions and framing the answers. Students should have an opportunity to "practice under game conditions" by taking what might be called "instructional quizzes."

These tests are not entered into the student's record, but are used as an instructional guide. In large classes where objective exams are used, the teacher might start a class hour with a multiple-choice quiz of five items. The answers are self-scored and a show of hands will probably indicate that most of the students made the right choice on most items. This immediately tells the entire class that neither the teacher nor the test was a culprit; the test questions are fair and valid. More important, the teacher can show how the questions sample the substantive material to be covered on the next formal examination. A few such rehearsals will link the testing thinking of students with the teacher's approach; anxiety is reduced and the students have learned about how to prepare for the midterm or final examinations. Their study skills have been strengthened. Similar procedures can be followed in providing practice for essay tests. The extra work required of the teacher is a legitimate demand considering the importance given to grading.

Friendly Instructional Relations. Inside or outside the classroom, teachers make good friends for students interested in getting the most out of college. It is easy to be friendly to bright students who emulate the teacher, but the demand for this friendly understanding and acceptance exceeds the supply for nontraditional students. What support can teachers give those students who stand on the fringe of the traditional social mechanisms that developed to serve the interests of young, robust, white, middle-class men (and some women)? A few institutional adaptations to the new students are under way: ramps for the handicapped, service and support units for minorities, and tuition and schedule adjustments for part-time adult students. Considerably more action by the faculty is necessary to remove nontraditional students from shadowed standing as second-class scholars.

Since this book is about instruction, my analysis of the teacher as a friend will stay in the classroom to show how the demographic attributes of these new students can be used as a resource for better teaching. My particular vehicle for this analysis is the adult student participating in a formal course of study. This rapidly expanding group of college students illustrates well how a teacher respects the sensitivities of students and builds instruction on what each student has to offer. A patronizing attitude is, of course, inexcusable, and this is why particular attention is given to certain guiding principles for managing the classroom hour rather than to personal interchanges between teacher and student.

Specialists in adult education perform a valued service in making clear the social and institutional changes needed to encourage and support lifelong learning (Wolfgang and Dowling, 1981). For the classroom teacher, however, only a few instructional habits may need to be modified. These considerations derive from two basic characteristics of the adult learner: motivation and memory.

Most older students are paying a personal price to go back to school and are alert to the relations between means (instruction) and ends (course objectives). Consequently, they expect the teacher to stick to the subject and to demonstrate that it is worth knowing. No special motivational padding is called for if the teacher does, in fact, have confidence in the educational benefits of the course content. Learning is just as satisfying for the older students as it is for their younger classmates. At the start, older students are self-conscious about being "different." Their self-esteem is on trial, and they present a well-rehearsed list of reasons why they may not keep pace. These stereotyped beliefs about "rusty brains" should be countered by making it clear that presumed age-linked factors have little basis for support. The need to strengthen one's habits of study is not limited to those who have lived a little longer.

It is pedagogically overreacting to tailor a course tightly to the inferred motivational characteristics of a particular group of students—older, handicapped, from other countries, or in a minority classification. Illustrative examples might be used in line with the expressed interests of such students, but the value of a course will be attenuated if the content is consistently modified for a particular category of students.

All students, young and old, must learn to manage their study in an environment of potential distractions. The adult student may not have more conflicts than younger students have, but they are likely to be different—family responsibilities, pressures from a full- or part-time job, and commitments within the local community. A friendly teacher will recognize a circumstance that is adverse to study and, within limits of fair play to other students, make appropriate adjustments. Another, but persistent, source of interference is internal: the conflicts derived from memory.

Over the years, adult students have accumulated a rich variety of significant experiences that have helped to mold their beliefs and to shape particular habits of thinking. On occasion, these prior values and opinions seem to clash with what the teacher has to say—especially in the social sciences and humanities. "If what the teacher says is right, then my beliefs, attitudes, and ideas are wrong," and few students accept such contradictions with alacrity. Defenses begin to appear when cherished ideas are, in effect, being debunked by the textbook or teacher. Whenever these barriers crop up, they interfere with both learning and retention. This state of affairs is a direct classroom example of the proactive interference paradigm ($A \rightarrow B \rightarrow b$) described in Chapter Five.

The teacher can and should take steps to minimize the confusion between prior learning and the kinds of responses expected, for example, on the next test. Experienced teachers can anticipate likely contradictions as perceived by students and deal with them openly and with due regard to the sensitivities of those whose ideas must change. The instructional problem is complicated by the dynamics of memory. Students may, on the surface, understand and accept a new line of thinking but, as time passes, their prior motives and values reenter the cognitive picture to reshape and sustain the older beliefs, which then interfere with the clean retention and recall of the new meanings.

Cognitive interference is simply one example of a teacher's instructional considerations for adapting to the special characteristics of a particular group of students—in this instance, the adult learner. Students from foreign countries frequently need guidance and practice in learning how to study for and to take machine-scorable examinations, compile a reading log, write term papers, and so forth. (I once had a transfer student from the Orient who had never taken an essay exam and, in the same class, a student from an African country who had never taken an objective examination.) Minority students often report feelings of social isolation; they have a limited identification with the traditions and aims of the institution and the larger body of students. Conflicts and confusions are ubiquitous; some are tangential, but others are significant intrusions to effective work as a student. Each student is different, and friendly teachers are sensitive to these differences and do what they can to reduce interference to academic success.

The guiding principle for the teacher as a counselor, mentor, or friend in the classroom is to respect and respond to the individuality of each student. A sympathetic ear is prerequisite to effective counseling. Rather than a teacher running the risk of unwittingly influencing decisions having long-lasting consequences, thoroughly confused or fearful and distraught students should be referred to a person or unit offering specialized assistance. The academic adviser brings educational realities to the student's attention, and this includes both information and motivational support. A mentor works with those students who need special attention in meeting the goals for graduation, strengthening the basic skills for college-level study—for example, reading, writing, and taking tests. The demographic factors relating to any student can, in the hands of a friendly teacher, be used as a resource rather than as a barrier for productive instruction.

One technical task of the teacher cannot be farmed out: evaluating student achievement with respect to what will be carried away from a course of study. We turn next to the significant issues of testing and grading.

- avoid the psychological evils of a fixed-sum game, i.e., students competing for grades;
- provide the students with a sense of efficacy, i.e., that their learning will significantly influence their grades; and
- be defined and interpretable.

To achieve such a grading system, we recommended using some kind of anchor measure. One possible measure was the performance of several previous classes on a common final exam (or at least a set of common items), very similar to what Smith reports doing. Another possibility was to use a common final across many sections taught by graduate teaching assistants.

Our third example is what we believe Smith objects to. We suggested that regular faculty, who teach different sections of the same course, get together and determine what the grade distribution should be for an average class in the course. Then they could use some anchor measure like ACT scores to see if and how a given section's distribution should differ from this average.

If we read Smith correctly, he thinks we are recommending institutional grading and reduction of the individual instructor's freedom, and he questions this. Although the instructor's academic freedom was not the point of our example, Smith is correct, at least to this extent. We would argue that it is not a violation of anyone's academic freedom to require, for example, that faculty teaching English composition teach writing skills, or if the course in general psychology is a prerequisite for all other psychology courses, that all the psychology faculty have a say in determining the course objectives. We would further suggest that the entire faculty legitimately should have input about the objectives of any course that fulfills a general education requirement.

Academic freedom was not intended to give the individual instructor the prerogative of deciding whether or not, or to what extent, he will teach the objectives of the course. Our teaching is not private behavior; we get paid for it. All of the constituencies of that payment have a legitimate concern with the outcomes of the course (even though they may have little or no expertise). We suspect that Smith would agree with this, at least theoretically, although both he and we recognize the educational and political problems involved.

It's the slight upward movement of the eyes, the quizzical downward glance, the hint of sarcasm implying less-than-adequate intellectual competence.

More central to our position is the suggestion that securing agreement among several teachers of the same course on the shape of grade distribution of an average section is simply a means of defining the normative meaning of grades. (This holds whether or not instructors teach the same content.) If one instructor awards 50% A's to typical sections, while another awards only 4% A's to average sections, what does an A mean?

Having said the above, we would also argue that it is the legitimate prerogative of the individual instructors to decide how they will teach the course, how they will help the students achieve the course objectives — as long as the methods are not unethical, illegal, or unreasonable. We recommend talking to one's colleagues as one way to ascertain reasonableness. We think that doing so will increase the accuracy — and therefore the fairness — of our grading; it may also help improve our teaching. ☐

The Ethics of Teaching

Like it or not, ethical issues confront us at the moment we assume instructional assignments. Quite independent of issues associated with teaching ethics, these are the front-line, bottom-line, moral concerns that face faculty when they enter the classroom. Could you list them?

After some hemming and hawing around, most of us do come up with some sort of list, but the labor of the effort bespeaks a certain unfamiliarity with the task. For most of us, these are not the most pressing instructional concerns. We may be right, but on regular occasions we ought to confront and wrestle with the ethical issues raised by the nature of the objectives of the educational enterprise. The following queries, conceived by Kenneth Boulding to "promote ethical analysis," focus and force the issues. Our profession does not require us to answer each other on these matters, but we do owe answers to *ourselves* – honest, soul-searched responses.

1. "Do I abuse my position of superior status to the student by treating him as a moral or social inferior?" The balance of power is not equitably distributed in the teacher-student relationship, and we know which way the balance tips. That's not wrong, but it does give teachers options not available to students. The issue is power – its use or abuse.

2. "Am I careful to avoid using my authority to force factual acceptance of propositions which may be only opinion or hypothesis? Do I tolerate honest disagreement? Would I be pleased if I were ever proved to be wrong by a student?" Most of us have no trouble with this in theory, but we neither look nor feel as assured when it happens in practice.

3. "Do I express my overt or covert hostility to my students in my teaching? Am I irritated by student failure, or am I quick to detect and encourage growth in knowledge and understanding, however slow or imperfect?" Intellectual superiority communicates itself subtly (most of the time). It's the slight upward movement of the eyes, the quizzical downward glance, the hint of sarcasm in the voice, all implying less-than-adequate intellectual competence.

4. "Am I myself interested in the subject matter that I am teaching? Do I enjoy learning more about it, and do I carry over to the student my own enthusiasm for the subject?" Sometimes it is hard to let students see our enthusiasm. We have devoted ourselves to the study of highly selective and eclectic areas of interest. Students have never heard of, and certainly do not care for, subjects near and dear to our hearts. Sometimes it feels risky to show them how much we care.

5. "Do I convey to my students both the setting and significance of my subject matter, so that it appears neither isolated nor irrelevant?" But the enthusiasm and devotion warps the perspective – makes the individual interest larger than life. Instructors must be knowledgeable in context, demonstrating relative and realistic proportion and detail.

6. "Do I convey to the student a necessity for intellectual discipline and a sense of the need for hard work on difficult intellectual tasks if the practical problems of our society are to be solved?" Enthusiasm makes learning fun, but it should not do so at the expense of making what is difficult, and requires work, appear simple, easily mastered. Learning requires discipline, determination and perseverance.

7. "Do I convey to the student the importance of technical skill and, at the same time, leave him problem-oriented rather than technique-oriented, the master and not the servant of the skills that he has acquired?" The question inquires into our ability to teach students to think, to make judgments, and to assess and respond in variable situations. Or do we let them force us to focus on the pat answers?

8. "Is my relation to other teachers one of cooperation in a great common task of transmitting and extending the knowledge structure of society, or am I jealous and suspicious of others? Am I conscious of my citizenship in the academic community? Do I insist on doing only those things that will lead to my personal advancement?" This question causes deep soul-searching and debate, because in many academic communities good teaching and advancement do not necessarily go hand in hand, and necessary and time-consuming work on the committees of the community rarely gets even a passing thanks.

See "The Task of the Teacher in the Social Sciences," in *Effective College Teaching*, a collection of edited essays published by AAHE and ACE in 1970. □

A Practical Handbook for College Teachers

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214

Chapter 1

The Past, Present, and Future in College Teaching: Where Does Your Teaching Fit?

In the three hundred years of college teaching in the United States, the teacher's role has remained, until quite recently, relatively stable. Development has certainly occurred, and we will detail that development in the remainder of this chapter. However, in comparison to the upheavals experienced in the development of books and educational technology, the deeper insights into learning processes reached by a tremendous amount of research, and the vast physical and social changes taking place on campuses, the teaching role has changed remarkably, and quite regrettably, little. Undoubtedly, this cannot continue. This book and others that highlight college teaching as a vital and evolving profession are but one bit of tangible evidence that teaching must and will change to meet better the needs of students in the last decades of the twentieth century. For such changes to occur, we must begin to think actively about the changes in teaching that are possible for the future. Alvin Toffler notes that our current teaching activities could be enhanced by modifying them to meet our personal images of the future. To break with the past, each of us must bring new ideas into our current instructional practices.

What are the new ideas in teaching that we must take into account? We obviously have no crystal ball that will accurately outline the details of such things. To suggest that we know for sure would certainly be pretentious. Several of our ideas are incorporated into the content of other chapters of this book, but they are only our best guesses regarding the future. What is more important is that everyone who teaches begin to speculate about the future. Each of us must examine our current teaching-learning assumptions, goals, values, and methods to determine whether they will help our students and us meet the challenges of the future. To begin this analysis, it is important first to determine the origins of some of our current educational ideas and practices. Such insights may help us decide whether we are hopelessly buried in the past. And a careful review of why we hold various beliefs and use particular methods may help us find ways to free ourselves from whatever binds we find ourselves in. This is not to suggest that all traditional goals, values, and methods are inappropriate. As we will soon illustrate, there are many beliefs and practices in higher education that have their origins as far back as the sixteenth and seventeenth centuries, and some of these beliefs and practices are still considered useful. Rather, our goal is to identify only those traditions that are producing problems for us in meeting the emerging needs of our students and disciplines. These are typically goals, values, and methods that make our teaching less flexible than it should be. Finally, we must begin to speculate about the future to determine what new beliefs and practices help us modify our current practices. The brief overview we present of past, present, and future ideas in college and university teaching in the United States should assist you in such an analysis.[1]

The Evolution of College Teaching

The Colonial Period (1600-1800)

During the seventeenth and eighteenth centuries, the role of the college instructor in colonial colleges was a paternalistic one in which hearing lessons and supervising conduct were equally important. Higher education was designed for the sons of the elite, with the express purposes of promoting the Christian religion, training young men for the ministry, infusing moral standards in otherwise temptable young minds, and disciplining the mental faculties. Indeed, as Francis Rosecrance documents, all but one of the first nine colleges founded in the United States were established primarily to train ministers, and secondarily to make higher education available to the sons of the elite. These purposes were approached through a rigidly prescribed curriculum of Greek, Latin, mathematics, and so-called moral truths. All were delivered by a single instructor, who was usually a *tutor*—a recent graduate of the institution. The tutor was not much older than his students and was filling time until he received his call to the ministry—the profession assumed by the vast majority. A hidden, unspoken agenda of the colonial colleges was to maintain a socially stratified society by separating the elite (college educated) from the masses. This tiny elite was created by the development of a strongly cohesive unit—the college class. All the men who entered in any one year became a *class*, a group that took all their instruction together, usually from one tutor who had the total responsibility for delivering the curriculum. Their collective struggle, day by day, year by year, against the inherent rigidity and prescription provided them with a cohesiveness not often matched by any but the most oppressed minorities.

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[1] A complete history of higher education is beyond the scope of this book. Instead, we have elected to highlight several trends that have occurred during the development of higher education in the United States since the colonial period. One must keep in mind that the origins of some ideas found in this country during the colonial period and the nineteenth century lie partly in educational goals and practices found in European universities.

Life in the colonial colleges was bleak—bare, unpleasant rooms and a day that began at sunrise. Following early morning chapel was a class period, then breakfast. After breakfast came alternating periods of class and study time, then lunch and perhaps a short recreational period. The afternoon pattern repeated that of the morning, with a second recreational period before supper time. After supper came more study, then evening chapel and bedtime. John Brubacher and Willis Rudy describe both the students' lot and that of the tutors: "When not attending class or engaged in recreation students were supposed to be in their rooms studying. Indeed tutors made regular rounds to guard against the devil's finding occupations for idle minds" (1958, p. 81).

Being solely responsible for all the activities of a class, including the evening study time, was an impossible burden for young, inexperienced tutors. Most were openly hated by their students, who frequently used every opportunity to retaliate against the unpleasantness of college life by abusing their tutor in all conceivable ways, including breaking his windows and laying traps for him.

The curriculum, which was impractical and expensive, continued the old English tradition of preparing "gentlemen and scholars." It created a learned and cultured group consisting of clergymen and the sons of the rich to lead and develop the fledgling country.

Teaching methods in colonial days consisted of recitation, lecture, disputations, and forensics, with the greatest amount of time and energy being given to *recitation*. Because the purpose of higher education was primarily discipline rather than meaningful learning, the heavy emphasis on recitation served well. In the recitation session, the tutor often sat at a raised desk, on which was a box containing the names of the students. The tutor drew a name from the box and named a passage or specific content for the student to recite.

> The heart of the recitation consisted of an exchange between the tutor and the student, the tutor citing and the student reciting. The citation was usually an assignment in a textbook, but might just as well be a previous lecture or scientific demonstration. In the recitation the student proved he had learned his lesson, at least the portion for which he was called on in class [Brubacher and Rudy, 1958, p. 82].

Obviously, the emphasis was on the lowest order of cognitive skill—pure memory. But the purpose of training in diligence and responsibility was fulfilled. Occasionally a particularly talented tutor raised the level of recitation to approximate a tutor-student discussion, and even more rarely a student might be challenged to interpret or even to offer an opinion. On the whole, however, recitation was mere reproduction and became the battleground between student and tutor where each tried to outwit the other.

During this period, *lecturing* emerged as a supplement to recitation. Books were not abundant, and the ancient lecture method gave students access to information they otherwise could not obtain. The instructor read his notes and students diligently copied them. In turn, the notes were used as another basis for recitation assignments. In the rather rigid atmosphere of the colonial classroom, lecturing periods provided, in addition to new information, a short break from the constant demands of recitation. Those of us who use the lecture method so frequently today may find it hard to believe that it once was a somewhat novel experience for students—and a welcomed one at that.

Colonial college students were required not only to study Latin and Greek, but to converse in Latin as well. Practice was encouraged by the use of the method of *disputations*, in which the tutor assigned a debatable thesis that concerned the nature of the soul or some other abstract concept. The student then had either to agree or disagree with the thesis through a series of syllogisms. Other students were then invited to offer differing views, using the same syllogistic reasoning process. When all students who were called on or volunteered had finished "disputing" the thesis, the tutor summarized the arguments and closed the exercise with his own opinion on the matter. About the middle of the eighteenth century, syllogistic disputations began to be replaced by public debate (*forensics*).

including debate over more popular issues. Until the nineteenth century, however, the recitation method remained at the heart of the process of higher education.

Testing in the colonial colleges had each student questioned orally in public by anywhere from five to twenty examiners. The examiners were college personnel and other learned citizens from the local community. Marks were not given, but judgments were passed on both the student and his tutor. The performance of his students was also an evaluation of the tutor. It was therefore to the tutor's advantage that his students performed well. Thus, when it was his turn to question, he was likely to give easy or leading questions to his own students and difficult ones to others. The game between tutors and students continued.

Are there ways in which your current teaching practices reflect some of the general ideas regarding educational practices present in the colonial period? Of course, we do not have the same type of tutor-student relationship. But there are a number of current educational goals, values, and practices that were popular during this period also. Table 1.1 contains several that we have identified. As you review the information in this table, consider whether your current teaching practices reflect some of the same things. Then think about whether those that do reflect the colonial period are still useful. We believe that some of them probably are valuable parts of our current educational environments. But each of us must decide which ones are still useful based on a personal analysis of their current advantages and disadvantages.

The Nineteenth Century

By the end of the eighteenth century, the impracticality and elitism of college became an issue, and a new emphasis was born. New colleges were founded, with a wider appeal, and college began to be "recognized as a means of getting ahead, not just as a means of registering that one's father had" (Rudolph, 1965, p. 36).

Francis Rosecrance also notes that early-nineteenth-century religious awakenings combined with westward expansion to influence the development of many small church-related colleges across the midwestern United States. The vast majority of these failed, but not before their democratizing effect was felt.

Concurrent with this broader appeal and purpose was the influence of scholars who attended German universities, where intellect and scholarly endeavor rather than rote memory were encouraged. Paternalism had been the hallmark of the eighteenth century; democracy became the hallmark of the nineteenth (Brubacher and Rudy, 1958).

The German influence was supported by the rise of science. Both the

Table 1.1. General Educational Goals, Values, and Practices from the Colonial Period

Review each of the statements listed below. They represent several of the goals, values, and practices that were implicit in our description of the colonial period. Rate yourself on a scale from 1 to 5, where 1 represents total disagreement and 5 represents total agreement with the statement. *Sum the ratings for your responses to these items. We will ask you to do something with them later.* For those items you rated 3, 4, or 5, how do they appear in your current educational practices? What are their advantages and disadvantages? What implications do they have for the future if you continue to use them in your teaching?

- The instructor is an expert and should have the last word in resolving debates on content.
- Instructors should prescribe in detail the course content, assignments, and methods of evaluation.
- Colleges and universities should serve a highly selected population of students.
- Student learning is facilitated when the students are highly dependent on the instructor for information.
- Our capability to think logically and rationally is enhanced by courses in mathematics, ancient languages, and philosophy.
- Recreational activities should be a very low priority in college.
- A student's first obligation is to study what is prescribed and thus build his or her mental capacities.
- Learning is hard work and demands personal sacrifice and discipline.
- Students are basically lazy and need to be goaded into learning information.
- Repeating verbatim what they have learned, in class or on a test, is a useful activity for students.
- If a student has not learned, then the instructor has failed as a teacher.
- Students should learn what the instructor thinks is important.
- Teachers know what students need to learn.
- The classroom learning process is often a battle between the students and the instructor.

curriculum and its attendant teaching methodology began to broaden. Natural philosophy (science) and new methods (increased use of lectures, demonstrations, and laboratory methods) were added to the curriculum but were staunchly resisted by traditionalists. The controversy among lecture, other methods, and recitation dominated much of the century. Supporters of the recitation method pointed out that in comparison to German universities, American colleges were mere secondary schools, and the students in them required discipline and the development of their "mental faculties" rather than learned wisdom. In addition, they argued, "natural philosophy" and its methods are practical and popular and therefore do not belong in the classical curriculum. Proponents of the lecture method suggested it challenged the professor to be prepared and to present material not otherwise available. Further, the artistic possibilities of a good lecture were cited. As it already had in the German universities, lecture eventually dominated the scene in American higher education. It remains a dominant teaching procedure that is fraught with controversy and criticism. The arguments over the lecture method will probably continue into the future, just as they have occurred since its introduction in our colleges and universities.

One particular form of the lecture was associated with the rise in popularity and respectability of science: a form known as the experimental lecture. Here the professor performed an experiment to demonstrate the principle that was the subject of the lecture. These demonstrations eventually led to the development of the laboratory method. Early in the century, the laboratory was viewed as the private domain of the professor. Gradually this domain was opened to students, at first only to watch, but later to participate in the professor's experiments. Involvement of students in this way eventually led to the discovery that students might learn inductively as well as deductively. Thus, the science laboratory as a teaching device was born. Finally, by the end of the nineteenth century, "at every step–definition of the problem, collection of data, formulation of a hypothesis, testing–the professor was sympathetic guide and critic" (Brubacher and Rudy, 1958, p. 88), but the student did the discovering and formulated the conclusions.

Science was responsible also for the introduction of seminars, which were supported by the new influx of German educators. From seminars and laboratories emerged a new relationship between teaching and research, a relationship that virtually changed the nature of higher education in America. Specialized courses were developed, research libraries and significant laboratory space and equipment were constructed, research papers became a popular teaching method, learned societies of earnest, like-thinking students and faculty developed, and graduate education was introduced.

Specialization began to appear in the curriculum, with the evolution of the colonial "natural philosophy" into the various scientific disciplines –geology, biology, physics, and chemistry; the colonial "moral philosphy" into the social specialties–economics, anthropology, sociology, and political science; and the colonial "classics" into language and literary specialties. With specialization, the earliest attempts at an elective rather than a prescriptive curriculum also occurred.

Also during the nineteenth century, the so-called collegiate way was born. At first, because colleges were usually located away from populous areas, residence accommodations were required. Later the idea of the [illegible] isolated from its surroundings and providing all that its students might need, became a tradition, if not a principle, of American higher education. In the residential, often pastoral, college, the extracurriculum developed. Debating clubs and literary societies for intellectual challenge, fraternities and student activities for social needs, and athletics for physical needs became as important as (if not more important than) the curriculum itself.

By the end of the nineteenth century, colleges began seriously to question themselves. Concerns over standards and excellence were raised. There was some anxiety that learning was simply not taken particularly seriously. College education had broadened, deepened, and become popular. Student evaluation had moved from public examination to written exams with marks (0–100) and grades (A–E), but student motivation often remained low. Near the end of the century, emerging institutions experimented with manual labor as a means of teaching educational principles, encouraging interest, and providing financial support for students. This movement, however, was hardly more than a justification for using student labor to construct needed facilities, and it was short lived. The century ended with college education popular, but all too often less than meaningful.

As you did after examining the colonial period, turn to Table 1.2 and assess to what extent your current teaching practices reflect some of the educational goals and practices that were present during the nineteenth century. Think about those that do reflect the last century in terms of how well they serve your needs and those of your students. What are their advantages and disadvantages?

The Twentieth Century

If the seventeenth and eighteenth centuries in higher education are characterized as paternalistic, and the nineteenth century as democratic, the twentieth century is nothing less than revolutionary. The century began with the prospect of an ever-increasing student population, many of whose aims conflicted with the traditional scholarly ones that the colleges had relatively recently adopted. In the early 1900s, social needs outweighed academic ones. As John Brubacher and Willis Rudy note, "Many a twentieth-century father sent his son to college less to sharpen his wits than to polish his manners" (1958, p. 259). Owen Johnson, in his early-twentieth-century novel *Stover at Yale*, criticized educational habits severely, charging that students learned nothing. Colleges, he pointed out, were mere "social clearing houses" organized not only to serve social purposes, but actually to prevent learning. Student dissatisfaction with the curriculum eventually led to significant reforms, particularly those that directed more attention to practical subjects. In attempts to motivate the generally unintellectual student population, innovations of numerous kinds were tried. Preceptors

Table 1.2. General Educational Goals, Values, and Practices from the Nineteenth Century

Review each of the statements listed below. They represent several of the goals, values, and practices that were implicit in our description of the nineteenth century. Rate yourself on a scale from 1 to 5, where 1 represents total disagreement and 5 represents total agreement with the statement. *Sum the ratings for your responses to these items. We will ask you to do something with them later.* For those items you rated 3, 4, or 5, how do they appear in your current educational practices? What are their advantages and disadvantages? What implications do they have for the future if you continue to use them in your teaching?

- A college education is for more than just a highly selected student population.
- Rote memory should not be emphasized in college.
- Teachers can learn from their students.
- A college education should prepare people to assume a job.
- Lecturing has positive benefits for students.
- Colleges should teach subjects that are practical and popular.
- Students need hands-on experiences in laboratories and other settings to learn.
- Teachers need to take a less directive role in prescribing what students should learn.
- Students know what they need to learn and should be encouraged to pursue such interests.
- Specialization within a field is an important goal of education.
- Colleges must help meet the social, physical, and intellectual needs of students.
- Teachers should help students develop the capacity to become independent learners.
- Students should be taught to think both inductively and deductively.
- Recreational activities should be an important part of the college environment.

were used to guide and stimulate students and to personalize the curriculum for them; honors instruction as a reward for excellence was begun; independent study became a way to encourage academic endeavor; and periods of work were alternated with periods of study in an attempt to make learning practical.

On a broader scale, three reform viewpoints or philosophies of higher education developed—the utilitarian or vocational view, which emphasizes job and career training; the scientific or intellectual view, which emphasizes research and the development of new knowledge; and the liberal or general education view, which emphasizes social development as well as intellectual and vocational development. These three viewpoints have remained prominent on university campuses, never completely comfortable in compromise, but rather living in a somewhat strained coexistence—even today.

Early experimental approaches. During the first half of this century, no single reform emerged as the one wave of the future, but the influence of John Dewey led to much experimentation, especially in the areas of lifelong learning needs and inductive rather than deductive methods.

One experimental approach was that of integrating disciplines for the purpose of realistically treating current issues. Thus the survey course was born, designed to interest young people in using their minds to tackle world and national problems. In this way psychology, sociology, and economics might be combined in a course entitled "Youth in Contemporary Society."

Another approach combined the development of divisions, such as physical sciences, social sciences, and humanities, with the idea of *general education*. A student who in colonial days would have followed a single prescribed curriculum, and who in the late nineteenth century might have had a free choice of electives, now had to master the basics (with a combination of prescribed electives) in each division before selecting an area of specialization. General education was seen as the basis for the widely informed and well-educated person. Through the universal adoption of the general education principle, professors began to differentiate standards for majors and nonmajors. Sometimes they even described their professional status by the number of major and nonmajor courses taught.

A third innovation was the Great Books approach to curriculum. Built on the idea that a classic book is always contemporary and relevant, the Great Books concept built anywhere from a year's study to an entire four-year curriculum on the study of specific, identified "classics."

Changes since 1950. Now, in the second half of the twentieth century, revolutionary changes in the world have challenged all previous views. Lewis Mayhew specifies the profound revolutions occurring since World War II as "the revolt of colonial peoples, the revolution in weaponry, the explosion of knowledge, the urbanization and technocratization of the society, and undreamed-of affluence" (1969, p. ix). The veterans of World War II and later wars brought with them to American universities an attitude of sobriety and seriousness. The "rah-rah" days of Joe College, football, and fraternities spawned in the era of extracurriculum began to wane.

The Cold War and the launching of Sputnik created a panic during which all attention was given to academic excellence. Fear led to an emphasis on technology as the only way to progress and excel. The academic boom in the decade between 1958 and 1968 saw many large research grants, curriculum reforms (especially in the sciences and technology), additional faculty positions, and better salaries. New courses and curricula developed, with the emphasis on production and efficiency. Many institutions became intoxicated with growth. New courses and programs of study were added before the long-range implications of the growth were assessed. Cuts in budgets because of declining resources in the 1970s would later eliminate as frills some of the changes of the 1960s. Yet such changes continued during the 1960s without much realization that a temporary boom in money and students was feeding the growth.

It took the Vietnam War and the student protest movement on campuses during the late 1960s to force another reevaluation of the goals and methods of higher education. Students demanded (perhaps somewhat naively and destructively) a greater voice in the affairs of the university and a realignment of the purposes of academe. Now, at least partly because of student radicalism, we are seeing higher education's responsibility to the community increased. Most important, the aim of education is no longer viewed as the study of externals. The traditional views and methods will no longer suffice in an era when the demand by students is for relevance, meaning, and preparation for the work world. Instead of the "pitcher" theory of education, in which the teacher holds the pitcher full of knowledge and pours out what he or she chooses into the receptacles of student minds, a new view is evolving. In this view teacher and student are partners, though not equal partners, in the challenge of learning—learning about the world, each other, themselves, and ways of managing their lives.

The Vietnam War and the campus and societal unrest of the 1960s made higher education systems more sensitive to issues of relevance, meaning, and job preparation, and declining resources during the 1970s and 1980s forced them to focus even more on such issues. Colleges and universities found themselves having to operate with less funding and fewer students than they enjoyed during the boom years of the 1960s. Inflation, high interest rates, cuts in expenditures by foundations, state governments, and the federal government, and fewer eighteen- to twenty-one-year-old students made institutions take a hard look at what offerings and services they could reasonably provide. Some institutions folded; others searched for ways to survive. One part of surviving was opening the doors to what Pat Cross describes as the "new students." Such students were generally older, highly interested in acquiring vocational skills, and either changing careers or, in the case of many women, formulating career plans for the first time. Continuing education and lifelong learning became very important concepts that guided academic programs. At the same time, institutions took steps to eliminate the "fat" and frills from their systems, and a back-to-basics attitude began to emerge. Course offerings and programs that a decade earlier were innovative and creative suddenly were eliminated or cut to conform to new budget realities. Those that survived were the ones considered absolutely essential to preserve the discipline or to meet the immediate needs of the influx of new students. Institutions found themselves needing to extend their reach to new student populations and to develop vocationally relevant curricula while holding the line on costs.

Learning theories. The twentieth century in higher education is also characterized by systematic attempts to develop teaching methods and practices based on theories of learning. The research literature on human learning has been used as a foundation for educational innovations. Three points of view tend to dominate this experimentation. They are the humanistic, behavioral, and cognitive views of learning. In a later chapter, we present in detail their assumptions and methods. For now, let us briefly examine a few of their principles and how they have influenced instruction in the twentieth century.

Instead of assuming that students will learn merely by passively digesting the pearls of wisdom transmitted to them by their professors, the humanistic view recognizes that learning is something that students must do for themselves. Teachers must not merely transmit, but must involve and engage students in the activities of discovery and meaning making. This emphasis on student needs and the study of oneself as part of the study of humanity is sometimes also called student-centered education, or affective education. Teachers are encouraged to guide and direct less and to facilitate or act as a catalyst for students to initiate and take responsibility for their own learning. Personal feelings and values, concerns with minority issues and sexism, and a reexamination of the content of the college curriculum are part of this approach. It is an attempt to personalize education. It represents a reaction against the excesses of the technological emphasis in education during the late 1950s, an emphasis that some people believed tended to dehumanize individuals, to bend, staple, and mutilate the spirits of students who felt left out by the increased structure, cognitive priorities, behavioral orientation and efficiency of the stress on technology.

The behaviorist point of view has also had an impact on educational practices during this century. During the early part of the twentieth century, John Watson introduced the idea that our behaviors are controlled by stimuli in our environments. He believed that anyone could be taught to become anything—doctor, lawyer, merchant, thief—by the proper manipulation of environmental stimuli. B.F. Skinner began in the 1930s to modify the earlier ideas of Watson and develop what he called a technology of operant conditioning. This technology stressed the need to shape behaviors in small steps and to reward each small success a learner had. It also emphasized that organisms learn at different rates and that some custom designing of learning environments is necessary to accommodate such variations. Skinner's work began with pigeons, rats, and other animals during the 1930s, and it was not until the late 1940s and early 1950s that educational applications began to appear. Teaching machines, token economies in the classroom, personalized systems of instruction such as the Keller Plan, learning contracts, and computer-assisted instruction have evolved based on behavioral principles.

Although behaviorism emphasized the role of environmental stimuli in controlling a learner's actions, the student's cognitive capability was not ignored. Procedures were developed to help students solve problems and make decisions more effectively, to use mental images to assist their learning of foreign languages and other subjects, and to develop cognitive procedures to monitor and control by themselves their ability to learn.

Regardless of their merits, the attempts at reforms based on principles of learning have been less than spectacular. To date, it is not a general practice for people systematically to develop their teaching based on principles of learning. In fact, some students and faculty seem to display passivity, apathy, and even overt hostility and cynicism when suggestions are made to substitute new methodologies for the old. One issue is that the nontraditional, unconventional, alternative ideas represent attitudes about education as well as procedures for teaching. They represent attitudes that (1) put the student first and the institution second; (2) concentrate more on the student's needs than the institution's convenience; (3) encourage diversity of individual opportunity rather than uniform prescription; and (4) deemphasize time, space, and course requirements in favor of competence and performance. Such beliefs run counter to many of the past experiences of students and faculty. Thus, they raise anxiety in students who want more structure or are simply afraid of deviating from the ways they learned in the past. Faculty often charge that new methods lack academic rigor or are based on ideas that are not well researched.

The reactions to nontraditional forms of teaching based on principles of learning are simply another reflection of the traditional-nontraditional controversy that has occurred throughout this and past centuries in higher education. But there need not be a quarrel between the traditional, with its emphasis on academic excellence and depth of inquiry, and the nontraditional, with its emphasis on lifelong learning and self-education. The nontraditional approaches can augment, fortify, and enhance more traditional philosophy and methods, can add new perspectives and horizons to educational opportunity and possibility, and will sometimes show that traditional forms have a necessary and perhaps irreplaceable role to play. We think, then, that the prevailing attitude today and for the future is that the traditionalist and nontraditionalist are not adversaries. One cannot supplant or supersede the other; they are inseparable partners in the single purpose of promoting learning. The traditionalist attitude of rigor and discipline is worthy of note by the nontraditionalist, and the traditionalist must take note of the nontraditionalist emphasis on independent study, flexible patterns, and lifelong enrichment. It may even be said that true creativity can come only from a dialectical synthesis of tradition and antitradition. Traditional forms that remain vital must be preserved, while those that have outlived their usefulness must be replaced by creative, relevant ones. This creativeness in the art of teaching is the wave of both the present and the future in higher education.

Earlier we asked you to assess your current practices to determine their origins in the colonial period and the nineteenth century. Whether you continue to endorse current goals and practices that originated during these periods depends on how helpful you perceive them to be. Table 1.3

Table 1.3. General Educational Goals, Values, and Practices from the Twentieth Century

Review each of the statements listed below. They represent several of the goals, values, and practices that were implicit in our description of the twentieth century. Rate yourself on a scale from 1 to 5, where 1 represents total disagreememt and 5 represents total agreement with the statement. *Sum the ratings for your response to these items. We will ask you to do something with them later.* For those items you rated 3, 4, or 5, how do they appear in your current educational practices? What are their advantages and disadvantages? What implications do they have for the future if you continue to use them in your teaching?

- Students should alternate course work with job experiences related to their major field of study.
- Education is a lifelong process that does not end with formal training.
- Students should learn to study and work on academic matters independently.
- It is important to stress practical subjects in a college curriculum.
- Vocational and career training is an important mission of a college or university.
- Colleges and universities must stress the development of new knowledge as one of their goals.
- Interdisciplinary course offerings should be encouraged in a college curriculum.
- The goal of education is to produce a well-educated person trained in a liberal arts tradition.
- Self-awareness is an important part of what students should learn in college.
- Teachers should be less directive and act more as facilitators of a student's learning.
- Teachers need to personalize their instruction to meet the unique needs of their students.
- Learning proceeds best if students are taught in small, discrete steps and rewarded after each step.
- Teachers should help students develop problem-solving and decision-making skills.
- Teaching methods should be developed based on theories of human learning.

contains ideas based on our discussion of the twentieth century. Try a similar analysis with the statements in this table and see if it provides additional insights into your teaching.

The Future

> Just as all education springs from some image of the future, all education produces some image of the future [Toffler, 1974, p. 3].

Alvin Toffler, Benjamin Singer, and other futurists argue that we must integrate future possibilities into our current educational practices. To illustrate this need, Toffler describes a mythical South American Indian tribe that teaches its young the old ways. They learn how to build and ride canoes, the types of fish that live in their lakes and how to catch them, as well as other important aspects of their culture. Because they seldom venture beyond the rather immediate boundaries of their tribe, they are unaware of a hydroelectric dam that is under construction upstream from their territory. In a few years the dam will be completed and their lakes will dry up. What has the tribe done to prepare itself for this event? What can it do if it is so tradition bound?

The metaphor is important and timely, because many of us assume that the main features of our present educational, social, economic, and political systems will continue indefinitely. Yet history shows that we can expect upheavals in our current ways of living. In our experiences, we find students and colleagues who say, "That is true, but it won't happen for a while and certainly not in my lifetime." Or they assume that even if some upheavals occur, their personal lives will remain relatively unaffected. In a series of experiments, Toffler finds similar tendencies in the people with whom he has worked. Participants in his research write about future scenarios as if they will happen "out there" to other people. The future is rather impersonal. They describe their lives as continuing much as they are today. For example, people developed scenarios of a future with antigravity cars, the destruction of large parts of the earth, cures for cancer, test-tube babies, a United States-Soviet Union alliance against China, accidental nuclear explosions, and robot computers holding political office in the United States. What would happen to their lives? One participant wrote, "I'll move into my own apartment, attend interior-design school, get a driver's license, buy a dog, get married, have children, and die at a ripe old age."

Clearly, there is a need for people to become sensitive to the possibilities of change and the probable effects on their lives. Futurists generally argue that our educational system could do a much better job of integrating the future into current curricula. They suggest that having no image or a false image of the future destroys the relevance of the educational effort

Yet our present educational systems, including higher education, are not seen as showing much concern. Today's schools and universities are perceived as past and present bound. Technological and social change is outracing the educational system, and our social reality is transforming itself more rapidly than our educational images of that reality. Students apparently are not taught to understand their investment in the future, to transfer classroom learning to future possibilities, to help change immature institutions, or to see themselves as individuals who can influence the future.

Benjamin Singer adds that the concept of the future is closely tied to the motivation of the learner. How people see their future is directly connected to their academic performance and their ability to cope with a high-change society. The future is not so much a subject as it is a perspective. Introducing it into our curriculum helps us to organize our knowledge in new ways. To these ideas we might add that such things will occur only if our current educational goals and practices are flexible and amenable to change. That is, to make use of a future perspective, our teaching methods will undoubtedly have to alter.

How to integrate ideas about the future into our teaching is an issue. The following are some possibilities for how this might occur:

- Developing personal images or scenarios about future developments in a field might help students increase their sensitivity to the future. In classroom discussions, students might sometimes be asked to forecast developments in a field and defend their answers.
- Teachers might ask students to speculate on the future images held by prominent historical figures or people in their field and what role these images might have had in their actions. For example, what images of the future guided Hitler, Nixon, Freud, Skinner, Goffman, Darwin, Sagan, or any other people who are relevant to a topic of discussion?
- Cooperative experiences and job-related courses might be developed in all fields. Thus disciplines like classics, philosophy, and history might have to change dramatically. Disciplines like psychology, education, and anthropology might have to do even more than they currently do. To accomplish such things, more long-range planning and forecasting need to be done in such disciplines than currently.
- To cope with change, students need to be able to go beyond current facts and knowledge. They will need to be able to bring themselves up to date. Thus they need to learn how to learn as part of their formal education. Classroom procedures might stress teaching people how to seek and find resources for solving problems, how to work

independently, how to benefit from working with other people, and how to ask the right kinds of questions. Classrooms must stress teaching people skills for learning as well as specific content.

- New classroom materials are needed to help students understand themselves better; to recognize their investment in the future; to help them feel more in control of their lives; to understand the nature of change; and to help them mature so they can help change immature institutions. What they learn needs to be thought about in terms of its personal implications.
- Students and faculty need to be increasingly concerned with moral issues. The future is not predetermined, but is subject to our influence. People need to become more concerned with values. Students must learn to understand their values clearly enough to make consistent and effective choices. Their values must be challenged and students asked to justify them explicitly in the classroom.
- To integrate future possibilities into the classroom and to improve the teaching of subjects that are rapidly changing, new approaches to teaching are needed. The information explosion in the study of human learning needs to be put to greater use in the design of instructional procedures. Institutions might demand that faculty pay more attention to the literature on learning when designing course procedures. Furthermore, the use of new teaching methodologies must be encouraged. Thus, computer-assisted instruction, simulations, role plays, classroom theater, practicum experiences, and "think tank" procedures should increase.

It is important to note that integrating a future perspective into education is not only to suggest what the world will look like next year or in the next hundred years. Such speculation is fun and often the topic of science fiction books and articles. Rather, the task is to have such images but also to suggest things that might be done today to help create desirable parts of those future images. We must remember that the future is something we help to create. It is not something that will occur without our participation.

Thus the question "What is the future of teaching in higher education?" is not answered well by simply describing scenarios of classrooms in the twenty-first century. Rather, we must suggest things that can be integrated today into our educational systems to create a future perspective and foundations for future practice. Based on the discussion in this section, several ideas for what might be done are listed in Table 1.4. As you did with the other time periods, rate the extent to which you agree or disagree with the statements.

Table 1.4. General Educational Goals, Values, and Practices for the Future

Review each of the statements listed below. They represent several of the goals, values, and practices that were implicit in our discussion of the future of higher education. Rate yourself on a scale from 1 to 5, where 1 represents total disagreement and 5 represents total agreement with the statement. *Sum the ratings for your responses to these items. We will ask you to do something with them later.* For those items you rated 3, 4, or 5, how do they appear in your current educational practices? What are their advantages and disadvantages? What implications do they have for the future if you continue to use them in your teaching?

- Speculation about the future is an important topic for discussion in the classroom.
- Students should be encouraged to develop personal images or scenarios about future developments in all disciplines.
- Having no image about the future destroys the relevance of the educational effort.
- Today's educational practices are too past and present bound.
- Technological and social change is outpacing the capacity of the educational system.
- Students should be taught to understand their investment in the future.
- Classrooms should stress teaching people skills for how to learn as well as specific content.
- Students need to learn about how to cope with the changes in the world around them.
- Students need to learn how to become effective change agents.
- Classroom practices need to become more bound to the research data on human learning.
- Teachers should use more of the advances in computers, video recorders, and other new technologies as part of their classroom methods.
- Students need to learn how to work independently to a greater extent as well as how to work better with other people.
- The values that underlie our disciplines need to be discussed as part of classroom learning.
- Education should help students develop a sense of personal control over their lives and their environment.

The History of College Teaching and You

After each section of this chapter, we suggested that you rate the extent to which you agree or disagree with the statements presented in the tables. Your total ratings should give you a good idea of which historical periods have influenced your current beliefs about education most and least. Most people find that their current beliefs are a composite of each historical period but that each period did not influence them equally. You may want to examine your ratings and the specific beliefs you agreed and disagreed with by answering the following questions:

- How satisfied am I with the beliefs that I have about education?
- What advantages and disadvantages do they have for me?
- How comfortable am I with the time period that seems to influence my beliefs most? Am I old fashioned, or do my beliefs help me to meet the needs of today's students?
- Do I need to change or modify any of the beliefs I hold?

You may want to think about your responses to these questions as you read the next chapter on examining and clarifying your values as a teacher. Your responses should give you a place to begin to examine your personal values as an instructor.

Summary

In this chapter, we have surveyed the landscape of the history of teaching in the United States from its beginning in colonial days to its as yet unheralded future. We have presented this history in terms of the goals, values, and practices that provided the guiding ideas in the colonial period (1600–1800), the nineteenth century, and the twentieth century, and those that will probably influence future developments.

In the colonial period, college instruction was guided largely by paternalistic ideas that college students should be selected, disciplined, dependent upon instructors, taught to develop rigidly prescribed mental facilities, and generally forced to subscribe to academic requirements into which they had no input and over which they felt no control.

The nineteenth century emphasized democracy, both in its attempt to provide higher education for the broad population rather than only the elite, and in its involvement of students in the process of learning. Consistent with this broadly democratic attitude was the emphasis on subjects that were practical, the concept of specialization as a goal of education, the introduction of job training and experiential learning, the mutual intellectual development of student and teacher, and the social aspect of higher education.

In the twentieth century, revolutionary ideas and behaviors sparked experimentation and innovation. The result has been that alongside traditional views now exist views of education based on humanistic concerns, learning theories, and behaviorist notions. Teaching can, and is, viewed from all three perspectives, with the result being a wide variety of approaches from which modern faculty can select.

Our presentation of the dominant ideas from each of these periods, along with our best guess as to prevailing ideas of the future, are offered as a stimulus for you to examine your own values, goals, and behaviors in both an introspective and a historical analysis. It's only with a clear idea of both the past and the present that we can thoughtfully influence the future.

References

ell, W. Social Science: The future as a missing variable. In A. Toffler, ed., *Learning for Tomorrow: The Role of the Future in Education*. New York: Vintage Books, 1974.

ubacher, J.S., and Rudy, W. *Higher Education in Transition*. New York: Harper & Row, 1958.

oss, P. *Accent on Learning*. San Francisco: Jossey-Bass, 1976.

hnson, O.H. Dink Stover at Yale, about 1909. In S. Bellman, ed., *The College Experience*. San Francisco: Chandler, 1962.

ayhew, L.B. *Colleges Today and Tomorrow*. San Francisco: Jossey-Bass, 1969.

cDanield, M. Tomorrow's curriculum today. In A. Toffler, ed., *Learning for Tomorrow: The Role of the Future in Education*. New York: Vintage Books, 1974.

eecrance, F.C. *The American College and Its Teachers*. New York: Macmillan, 1962.

udolph, F. *The American College and University: A History*. New York: Vintage Books, 1965.

ger, B.D. The future focused role image. In A. Toffler, ed., *Learning for Tomorrow*. New York: Vintage, 1974.

inner, B.F. *Beyond Freedom and Dignity*. New York: Alfred A. Knopf, 1971.

offler, A. *Future Shock*. New York: Random House, 1970.

ffler, A. *Learning for Tomorrow: The Role of the Future in Education*. New York: Vintage Books, 1974.

tson, J.B. *Behaviorism*. Chicago: University of Chicago Press, 1924.

lson, L., ed. *Emerging Patterns in American Higher Education*. Washington, D.C.: American Council on Education, 1965.

Promoting the Adviser's Role

Janet R. Matthews and Mark E. Ware

An abundance of literature describes suggestions for teaching and expectations for scholarship. For example, Browne and Keeley (1985) offer advice to new teachers who aspire to excellence in their profession. And while Weaver (1986) acknowledges the primacy of teaching at institutions that do not possess a commitment to research, he nevertheless argues convincingly for scholarship, broadly defined.

Advising, which is an additional demand for most teachers at the collegiate level, receives disproportionately less attention in the educational literature. Moreover, many colleges and universities provide their faculty with minimal information about advising limits and the amount of time that it can require. A common experience finds new teachers with some printed materials such as the university catalog and departmental or college forms, and a list of academic advisees. In short, teachers too often have only their own experience as advisees as a guide.[1]

The purpose of this article is to describe four ways to make advising more productive by preparing for the first meeting, integrating course selections and career plans, promoting collegial support, and serving as surrogate parent.

Preparing for the First Meeting

Some students enter an advising session confused, uncertain, or uninformed, and they cannot formulate questions for the adviser. An adviser can spend an entire appointment trying to discover a student's needs. When advising time is at a premium, faculty can help students and themselves by providing an orientation before the initial meeting.[2] The orientation can consist of having students read printed material that describes factual information about the department, its curriculum, and students' opportunities for development within that major. A department can enclose an informational brochure with a letter notifying students about their acceptance into the department. The student and adviser can then use the first meeting more effectively by clarifying issues in the brochure and by applying the issues to the student's circumstances.

A second advising brochure can provide information about the career pursuits of graduates from that department. The brochure can describe the occupations and graduate and professional schools that former majors attended. A third brochure can describe types of graduate or professional programs, standard entrance examinations, and a time line for applying. The first semester of students' junior year is not too early to send copies of these brochures.

Two approaches exist for developing printed materials. An individual faculty member can develop them for the department,[3] or have the department's honor society or club undertake the task. Such a service project would be of assistance to new students and would be a vehicle for recruiting new members for those organizations.

Integrating Course Selections and Career Plans

Approving students' class schedules is a common activity for undergraduate teachers. However, at issue is whether the process simply requires one's name on a piece of paper or provides an opportunity to discuss why students take some courses rather than others.

In the latter case, students' postgraduate career goals provide one rationale for selecting courses. Because many schools provide students with considerable flexibility in fulfilling requirements, students can select required and elective courses on the basis of their career objectives. For students with clear goals, the adviser can provide a list of supporting courses that are consistent with pursuing graduate degrees, advanced education in such areas as medicine or law, or other postgraduate objectives such as employment in business, social service settings, and governmental agencies. In brief, the adviser can help students in clarifying goals, evaluating priorities, and making decisions about course selection and scheduling. When advisers adopt a mutual problem-solving approach versus presenting themselves as experts, students are more likely to seek

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continued information from them. As students become more involved in the process, advisers' suggestions about courses and for career exploration can promote the students' development.[4]

Another step toward more effective advising consists of learning about the educational and occupational pursuits of students with a bachelor's degree in one's discipline. An undergraduate degree is not the "dead end" that some people seem to believe.[5]

For some students, identifying appropriate career alternatives is a major difficulty. Advisers can provide several options for those students. The university's counseling center is another resource. Most counseling centers provide career assessment services as well as descriptive materials about careers. Students may be unaware of those services, so that timely referrals may be productive. Or a career exploration course can provide a more structured approach to identifying career alternatives.[6]

Students expressing interest in professions outside of their major can be referred to special advisers. On some campuses, there are individuals who specialize in advising students interested in professional schools such as law or the health sciences. Advisers can encourage students to spend time with special advisers. They can provide more specific information about dates for entrance exams, unique course requirements for particular schools, information about required grades, and financial assistance.

Advisers can also schedule a portion of their time with special advisers to increase their own knowledge. Moreover, contacts with special advisers can help other advisers develop a list of requisite or recommended courses for students planning careers in those areas.

Promoting Collegial Support

Intradepartmental communication is another component in effective advising. For smaller departments, communication may be relatively easy. As departments increase in size, however, an individual may lose touch with colleagues' advising interests and expertise. Readers who have an interest in approaches that have been tried in large departments may want to learn about the experiences of Halgin and Halgin (1984).

When certain advising issues, such as elective courses for liberal arts students planning to pursue a career in business, arise repeatedly, teachers can distribute pertinent information to others in the department. Maintaining open lines of communication with colleagues increases the likelihood of knowing who is particularly knowledgeable about specific issues, such as graduate school admission. Moreover, faculty are in a better position to make effective referrals when they know about their colleagues' advising strengths.

When only one member of a department or division can afford to travel to a professional convention, advanced planning directed toward advising-related information can be productive. Sharing convention information with colleagues is not only cost effective but also can extend the scope of effective advising.

Individuals having access to audiovisual production facilities can expand their advising capacities by developing media presentations. Videotapes of panel discussions about post-graduation employment or educational alternatives can be viewed later by students who were unable to attend the presentation itself. Ware (1984) reports on the development and use of such videotapes for a variety of life choices.[7]

Serving as Surrogate Parent

Many undergraduate advisers report that they serve as surrogate parents. For some students, parents are too far away, geographically or emotionally, to provide the support that students want. In those instances, students may turn to teachers for assistance with personal and social problems in addition to academic ones. Although it is not possible to set rigid guidelines for surrogate parenting, advisers should realize that limits do exist. Some issues that students raise require referral to professional counselors. For example, we have made referrals for problems involving alcohol abuse, sexual assault, depression, and suicidal thoughts and behaviors. Other problems require parental participation. The financial implications of a delay in graduating may require parental involvement. Often, however, a faculty member can help students who simply need or want to talk to an empathetic adult.

In summary, the teachers' advisory role is multidimensional and can be complex. Novice teachers should understand that developing effective advising skills takes time. The suggestions presented here, such as consulting the published literature, asking for assistance from colleagues, and drawing on personal experience can contribute to the development of the teacher's effectiveness as an adviser.

NOTES

1. Advising issues vary with the size of one's department and university. Undergraduates in large universities can encounter a system that does not respond to them in a personal way. See Richard P. Halgin and Lucille F. Halgin, 1984. An advising system for a large psychology department. *Teaching of Psychology* 11:67–70. The Halgins describe a program of checkups that more effectively meets the needs of undergraduate psychology majors in their department. Their program is easily adaptable to most academic departments. Others provide recommendations for departments committed to improving academic advising. See Robert W. Titley and Bonnie S. Titley, 1982. Academic advising: The neglected dimension in designs for undergraduate education. *Teaching of Psychology*, 9:45–49. Finally, there are strategies for overcoming obstacles to advising. See John F. Kremer, 1980. Three obstacles to improving academic consultation. *Teaching of Psychology*, 7:153–156.

2. Developing effective orientation strategies relies on discovering students' needs. Reports about needs analyses exist for curriculum and career development. See Thomas V. McGovern and Brenda K. Hawks, 1984. Transition and renewal of an undergraduate program in psychology. *Teaching of Psychology*, 11:70–74; Patricia W. Lunneborg, 1986. Assessing students' career needs at a large public university. *Teaching of Psychology*, 13:189–192; Mark E. Ware, 1986. Assessing students' career needs at a small private university. *Teaching of Psychology*, 13:185–188. Readers may also find others' advising experiences helpful. See Mark E. Ware and Richard J. Millard, eds., 1986. *Handbook on student development: Advising, career development and field placement*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Inc. Finally, psychology advisers may want to take advantage of advising resources in their discipline. See Janet R. Matthews, Anne M. Rogers, and C. James Scheirer, 1986. Selected resources for college teachers of psychology. *Teaching of Psychology*, 13:3–7.

3. For examples of brochures that one of the authors developed, write to Mark E. Ware, Department of Psychology, Creighton University, Omaha, Nebraska 68178.

4. See John F. Kremer, 1980. Three obstacles to improving academic consultation. *Teaching of Psychology*, 7:153–156. Advisers should also be prepared to refer students experiencing considerable confusion and/or uncertainty about career aspirations to the school's counseling center when such a facility exists on campus.

5. A variety of literature amply demonstrates the range of opportunities for, and versatility of, the liberal arts major in psychology. See the following: James R. Davis, 1979. Baccalaureate in psychology: 1969 and 1970. In Paul J. Woods, ed. *The psychology major: Training and employment strategies* (pp. 110–114). Washington, DC: American Psychological Association; Patricia W. Lunneborg, 1974. Can college graduates in psychology find employment in their field? *Vocational Guidance Quarterly*, 23:159–166; Robert W. Titley, 1978. Whatever happened to the class of '67? *American Psychologist*, 33:1094–1098; James A. Walsh, 1979. A Montana perspective on vocational opportunities. In Paul J. Woods, ed. *The psychology major: Training and employment strategies* (pp. 115–119). Washington, DC: American Psychological Association; Mark E. Ware and Ann E. Meyer, 1981. Career versatility of the psychology major: A survey of graduates. *Teaching of Psychology*, 8:12–15; Paula Sachs Wise, Gene F. Smith, and Frank E. Fulkerson, 1983. Occupations of psychology majors receiving undergraduate degrees from Western Illinois University. *Teaching of Psychology*, 10:53–54; Paul J. Woods, 1979. Employment following two different undergraduate programs in psychology. In Paul J. Woods, ed. *The psychology major: Training and employment strategies* (pp. 120–125). Washington, DC: American Psychological Association.

6. Several articles describe such career courses. See the following: Venus Bluestein, 1977. Variations on the fields of psychology course. *Teaching of Psychology*, 4:146–147; Tricia Haney and Priscilla A. Howland, 1978. Career course for credit: Necessity or luxury? *Journal of College Placement*, 39: 75–79; Paul R. Korn, 1980. An undergraduate helping-skills course: Skill development and career education. *Teaching of Psychology*, 7:153–156; Kennon A. Lattal, 1980. Psychology as a profession: A brief course providing career information for psychology majors. *Teaching of Psychology*, 7:234–244; Thomas V. McGovern, 1979. The development of a career planning program for undergraduate psychology majors. *Teaching of Psychology*, 6:183–184; Mark E. Ware, 1981. Evaluating a career development course: A two year study. *Teaching of Psychology*, 8:67–71; Mark E. Ware, 1985. Assessing a career development course for upper level college students. *Journal of College Student Personnel*, 26:152–155; Mark E. Ware and Mark L. Beischel, 1979. Career development: Evaluating a new frontier for teaching and research. *Teaching of Psychology*, 6:210–213.

7. For more information about videotapes, write to Mark E. Ware, Department of Psychology, Creighton University, Omaha, Nebraska 68178.

REFERENCES

Brown, M. N., and S. M. Keeley. 1985. Achieving excellence: Advice to new teachers. *College Teaching*, 33:78–83.

Halgin, R. P., and L. F. Halgin. 1984. An advising system for a large psychology department. *Teaching of Psychology*, 11: 67–70.

Ware, M. E. 1984. Teaching life choices through videotape. Presented at the meeting of the International Congress of Psychology, September, Acapulco.

Weaver, F. S. 1986. Scholarship for teaching faculty. *College Teaching*, 34:51–58.

Shortage Seen For Faculties For the 1990's

By EDWARD B. FISKE

Unless preventive steps are taken soon, American colleges and universities face a major shortage of faculty members starting in the next several years, according to the most comprehensive study ever conducted of the academic job market.

Contrary to the common wisdom, the study, released yesterday, found that the biggest shortfalls will occur not in the sciences but in the humanities and social sciences, and that the shortage will be caused mainly by growth in student enrollments and not by large-scale retirements of professors.

"We need to increase overall production of new Ph.D.'s by two-thirds," said William G. Bowen, co-author of the report. "In the humanities and social sciences, we need to double the current numbers."

First Statistical Confirmation

The study was conducted by Mr. Bowen, former president of Princeton University, who is now president of the Andrew W. Mellon Foundation, and Julie Ann Sosa, a Princeton graduate now studying at Oxford University.

Their research provides the first statistical confirmation of a faculty shortage that has been discussed anecdotally in academic circles for the last three years.

It also puts some new twists on the debate, starting with its rejection of prevailing thought that the expected faculty shortages will result primarily from the extensive retirement of faculty members hired as American higher education was expanding in the 1950's and 1960's.

Main Factors Are Demographic

While such retirements will create much of the vacancies, the year-by-year rate at which they occur is expected to be steady. The major cause of the shortage will be the opening up of new jobs to accommodate a growth in enrollment expected to begin in 1997. "The main factors are demographic," Mr. Bowen said, referring to the bulge of students now moving through elementary schools.

This finding alone could reduce concern about new Federal legislation banning mandatory retirement.

"Eliminating mandatory retirement won't kill off jobs," said Mr. Bowen. "You're talking about a couple of percentage points."

The study, "Prospects for Faculty in

Continued on Page 20, Column 3

from The New York Times, Wednesday,
September 13, 1989.

- Can you find the projected shortages, if any, from your discipline?
- What strategies or plans are Universities making to cope with these shortages?
- What are projections of early retirement incentives vs. the elimination of mandatory retirement age?
- What changes, if any, might we see in tenure and promotion guidelines?
- How might all of this impact faculty mobility?

Major Faculty Shortages Foreseen for the 1990's

Continued From Page 1

the Arts and Sciences: A Study of Factors Affecting Demand and Supply 1987-2012," is being published by Princeton University Press at 41 William Street in Princeton, N.J. 08540.

The picture the authors paint of what Mr. Bowen called a "serious staffing problem" in higher education contrasts sharply with popular images since the 1970's, when hiring became sluggish and the taxi-driving Ph.D. an established part of the American scene.

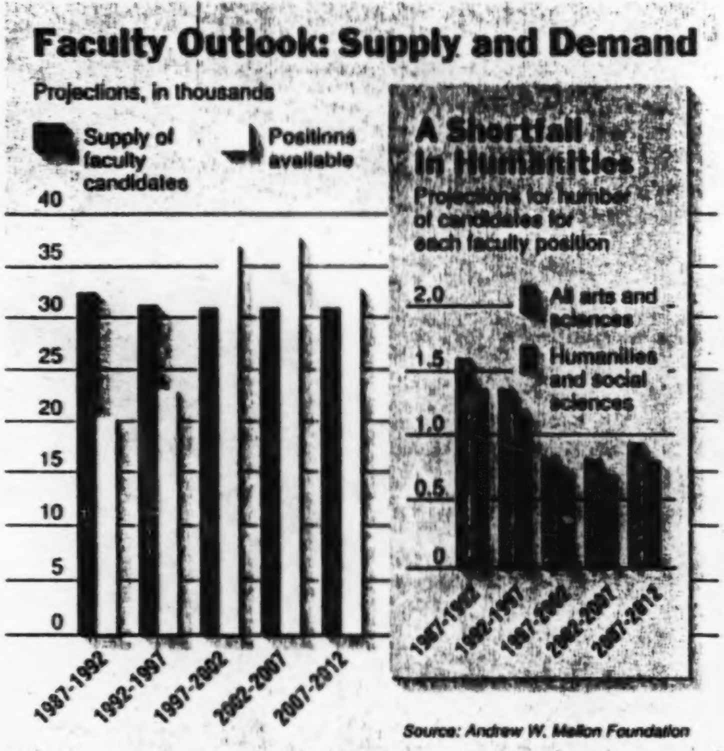
The study reported that in the 1987-1992 period, there will be 1.6 candidates available for each available teaching position. But by 1997-2002, the figure will drop to 0.83 for each job, with 30,934 new faculty members to fill an estimated 37,091 positions. . For 2002-2007 the figure is projected to be 0.82.

Where Real Shortfalls Lie

The study found that contrary to widespread belief, the pending faculty shortage would not be concentrated in the natural sciences. "There's a problem in the sciences," said Mr. Bowen, "but the real shortfalls lie in the humanities and social sciences."

The study estimated that in the 1997-2002 period the candidates-to-jobs ratio would be 0.71 in the humanities and social sciences, 0.80 in mathematics and the physical sciences, and 1.13 in the biological sciences and psychology.

Mr. Bowen said a "flight from the arts and sciences" was the cause. His data show that from 1971 to 1985 the percentage of graduate and undergraduate degrees conferred in the arts and sciences fell to 25 percent, from 40 percent. By contrast, major increases occurred in business and engineering.



Source: Andrew W. Mellon Foundation

The New York Times/Sept. 13, 1989

Mr. Bowen emphasized that as in any industry, the ideal situation would be a ratio of roughly 1.3 candidates available for each job. "You never have a perfect match," he said. "If you're looking for a Renaissance scholar, it doesn't help much to have an economist available."

Shortfalls are expected in the humanities and social sciences.

The study estimated that restoring the overall ratio to the 1.3 level would require a 64 percent increase in new doctorates. To do so in the humanities and social sciences would require a 92 percent increase.

Quality problems are also an issue. A ratio close to 1.0 means that colleges are in the position of having to hire just about anyone who comes along. The quality issue is magnified, he said, by data showing that the proportion of doctorates being awarded by major research universities is declining.

The study focused on the arts and sciences in four-year institutions and did not cover professional schools or their undergraduate equivalents in fields like education, engineering or business.

Mr. Bowen emphasized that the findings of the study were projections rather than predictions. "Enlightened policies can be adopted to increase the pipeline so that the shortages we envision do not come to pass," he said.

'If you're looking for a Renaissance scholar, it doesn't help much to have an economist available.'

He said universities should shorten the time required to obtain a Ph.D., which now ranges from about 7 years in mathematics to more than 12 years in the humanities. One way of doing this would be to ease up on the number of hours that candidates must spend teaching.

Another need, he said, is to increase the number of fellowships and the amount they pay. Part of the responsibility for this, he said, lies with colleges and universities and part with the Federal Government, whose support for fellowships has declined substantially since the late 1960's.

"Prospects for Faculty in the Arts and Sciences" is the first major study of the academic labor market since a 1974 report by Allan M. Cartter that discussed the tight conditions of the recent period.

The two researchers analyzed faculty employment data and other statistics compiled by the National Research Council and other sources. They were the first to use computers to develop overall conclusions about faculty employment by assembling data on various trends, like birth or college-going rates, and by factoring out Ph.D. holders likely to seek nonacademic employment and foreign nationals likely to return to their own countries.

Part-timers present a fascinating pattern. Two thirds are twenty-five years of age or older, and the majority return to college after having "stopped out." Slightly over one half are married, and almost 60 percent are employed full time. Academically, part-time students have a lower high school grade-point average than the others,[14] but their college grade-point average is slightly higher. Surprisingly, our research revealed that career success and material well-being are less important for these students. And we also found that part-timers are as inclined as full-time students to support more course requirements for graduation (Table 6).

Table 6 Characteristics of Part-Time and Full-Time Undergraduates at Four-Year Institutions

	Percent	
	Part-Time	Full-Time
Age: twenty-five years old or older	67	13
Dropped out for some period since entering college	58	16
Married, divorced, separated, or widowed	53	10
At present employed full time	59	4
Father's occupation: professional or managerial	54	65
skilled or semiskilled	42	32
Father's education: high school or less	55	36
College grade-point average of B or higher	61	55
These goals are "very important": career success	57	63
financial success	40	43
intellectual development	70	69
The chief benefit of a college education is that it increases one's earning power	38	44
College should require all undergraduates to take more courses in: literature	25	26
science	41	32
computer science	73	74
the arts	30	27

Source: The Carnegie Foundation for the Advancement of Teaching, National Survey of Undergraduates, 1984.

To better inform part-time students about campus services and activities, some institutions assume the cost of mailing information directly to their homes. Others run a special column for part-timers in the student newspaper; some institutions issue special newsletters for them. Still other colleges schedule orientation seminars for part-time students on weekends or during evening hours, when they are more likely to be free. And one institution put an orientation session on videocassette so it could be viewed not only by the parents of incoming young students, but also by part-time students who find it difficult to attend briefings on the campus. Regardless of the strategies used, we strongly urge that all colleges with nontraditional students find creative ways to help them become full partners in the community of learning.

Orientation, while essential, is only the beginning. After the flush of newness fades, all new students soon discover that there are term papers to be written, course requirements to be met, and conflicts between the academic and social life on campus. Students need to talk about these tensions. One freshman told us, "I call home a lot, especially when I have a big exam. The main thing my mom wants to know is whether I'm eating right and getting lots of sleep, which really doesn't help much, but at least I feel better just talking about my worries."[17]

The successful college offers a well-planned program of advising for all students, one that provides support throughout the entire freshman year. This is the goal, and yet we found advising to be one of the weakest links in the undergraduate experience. Emergency services, such as a health clinic and psychological counseling, are found on most campuses, but only about a third of the colleges in our study had a quality advisement program that helped students think carefully about their academic options. One student at a college with no formal advising structure said, "At registration time I couldn't get much help. I finally decided to talk things over with my roommate."[18]

When we asked students in our national survey how they feel about the quality of advising services on their campus, we learned that at least half the students had never sought advice on financial, vocational, or personal matters. And almost one in five had never sought advice on academic matters (Table 7). But again, patterns varied widely from one type of institution to another. As one moves from the large research university to the small liberal arts college, the students rate the advising as more highly adequate, reflecting the fact that on small campuses the faculty are often more actively involved.

At one small liberal arts college in the Midwest, we found that members of the faculty do most of the academic advising. A student at this college told our site visitor, "I can see my faculty adviser almost any time, and we sometimes meet in the student union for coffee just to talk things over." At a medium-sized college in the South we found an advising program called "Safety Net." Members of the faculty meet freshmen individually and in groups and receive teaching credit for their advisement work. The main worry we heard expressed is that some students unburden themselves of emotional problems that faculty members feel ill equipped to handle.

A senior professor who plays a central role in the program told our researcher, "The idea is not that we are somehow *in loco parentis* —we're not trying to be surrogate parents. But in some cases we've been that. And if you get a student who really unloads, why, you have an awful lot to pick up on. That's why we back this thing up with a counseling center. We encourage faculty, when they're faced with a problem they can't handle, to get on the phone and refer the student to a professional counselor."[19]

Almost without exception, we found that faculty at large institutions are less actively involved in formal advising, although they still spend time informally with students, especially those who have selected their academic major. On these campuses, a professional counseling staff does most of the academic advising for the lower division students. At one such university, freshmen who need approval for their course load report to the dean's office, leave their names with the receptionist, and sit, waiting to be called. Long lines are common. When an adviser is free, he or she goes over the student's proposed program, checking to see that general education requirements will be met.[20]

Table 7 Undergraduates' Assessment of Institutional Advising Programs, 1976 and 1984 (percent responding)

	All Institutions		1984: By Type of Institution					
	1976	1984	Public	Private	Research University	Doctorate-Granting University	Comprehensive College	Liberal Arts College
Vocational advising								
Highly adequate	6	7	6	9	6	8	7	8
Adequate	21	23	22	27	24	21	21	32
Not very adequate	15	11	12	10	12	13	11	10
Never sought advising	58	59	60	54	58	58	61	50
Academic advising								
Highly adequate	15	17	15	23	15	14	17	27
Adequate	44	47	47	46	47	47	47	46
Not very adequate	22	18	20	12	21	20	19	12
Never sought advising	19	18	18	19	17	19	17	15
Financial aid advising								
Highly adequate	9	10	9	13	8	8	10	17
Adequate	22	25	25	26	23	23	26	30
Not very adequate	14	15	14	16	14	15	15	15
Never sought advising	55	50	52	45	55	54	49	38
Personal advising								
Highly adequate	8	9	8	12	6	7	9	15
Adequate	15	16	15	19	15	16	16	21
Not very adequate	8	7	7	6	7	7	6	8
Never sought advising	69	68	70	63	72	70	69	56

Source: The Carnegie Foundation for the Advancement of Teaching, National Survey of Undergraduates, 1976 and 1984.

Most of the advisers on this campus are doing their best under difficult conditions. A flood of students must be seen during the two-week preregistration period and advisers have little time to talk about academic goals. In the hurry-up sessions we observed, we found that deciding whether a student should take an anthropology course or one in the history of dance was determined more by schedule-juggling than by what would be in the best interest of the student. The problem was not an uncaring attitude. Rather, it reflected the press of too many students to advise and, to some extent, the ambivalence on this campus about the role faculty should assume.

To what extent should faculty members be personal as well as intellectual mentors to students? Is it the kindly, caring Mr. Chips or the stern, detached law professor characterized by John Houseman in *Paper Chase* who embodies the ideal relationship between faculty and students? We found in our surveys and interviews that the faculty "role" has no one definition but is determined by the culture of the institution. Mr. Chips is alive and well at many liberal arts colleges, and large research universities have their fair share of John Housemans.

When we asked students directly about faculty influence, about one in four said there is *not* even one professor on their campus who takes a personal interest in their *academic* progress. On the other hand, about the same number said they were able to identify a member of the faculty who had greatly influenced their academic careers. As to nonacademic matters, 39 percent of the students said there are professors at their college whom they feel free to consult on *personal* concerns. However, this was down from 53 percent in 1976.

Especially revealing, and perhaps most disturbing, is the fact that almost half the undergraduates (48 percent) in our survey said they felt that students at their colleges are treated like numbers in a book. But here again we found a sharp difference between the public and private institutions and also between the liberal arts colleges, where only 9 percent agreed, and the research universities, where 62 percent of the respondents said students at their school are treated like numbers in a book (Table 8).

Table 8 Student Attitudes Toward Their College: 1976 and 1984 (percent responding "yes")

	All Institutions		1984: By Type of Institution					
	1976	1984	Public	Private	Research University	Doctorate-Granting University	Comprehensive College	Liberal Arts College
Are there professors at your college who take a special interest in your academic progress?	63	59	57	68	52	56	61	73
Are there any professors at your college who have had a great influence on your academic careers?	46	44	42	50	38	43	46	53
Are there professors at your college whom you feel free to turn to for advice on personal matters?	53	39	36	49	30	37	41	54
Most students at my college are treated like numbers in a book.	45	48	55	23	62	57	45	9

Source: The Carnegie Foundation for the Advancement of Teaching, National Survey of Undergraduates, 1976 and 1984.

There are trade-offs in American higher education. Small colleges, because of size alone, find it easier to stay in touch with students, and larger institutions, although more impersonal perhaps, provide diversity and a richness of programs, and frequently set standards for scholarship and research in higher education. We need variety, and while advising undergraduates may pose a special problem for large institutions, the difficulties are, we believe, not insurmountable. They should be viewed, in fact, as an important challenge.

Several years ago, the University of Maryland opened an Undergraduate Advising Center after the campus senate became concerned that many students were selecting majors too hastily. The Center, staffed by several full-time advisers, helps students clarify their goals and make academic choices. The Maryland program also has a "resident aide" who is available to students after regular hours. On this campus an outstanding faculty adviser is selected every year from each of the five major academic areas.[21]

Wichita State University has a comprehensive advising program for all incoming students that has dramatically reduced attrition, and Miami University in Ohio has a successful program called "The Freshman Year." Entering freshmen at Miami attend a summer orientation program at which faculty members from each of the academic divisions advise and register incoming students. A freshman adviser lives in each residence hall. Since it is not necessary for students to make an appointment or wait for "office hours," their questions can be addressed as they occur. Miami, by staying in close touch with students and by taking advising into residence halls—which are small communities—has an impressive retention rate, one well above the national average.[22]

We strongly urge that all institutions, large and small, plan a comprehensive program of counseling and advising throughout the freshman year. Full-time professionals, who report to the chief academic officer of the college, should coordinate the program. On some campuses part of the load of each full-time faculty member may be assigned to advising; on others faculty may come in onl occasionally to lend support but it is crucial, we believe, for advisin and the academic priorities of the campus to be closely linked. O several campuses we visited, special forums brought faculty int residence halls to talk with students and to help them consider thei academic options.

Graduate students and upper division students also may be effec tive as aides, especially in advising freshmen. And members of th faculty who are at or near retirement may be helpful, too. Senio faculty are well acquainted with the realities of life, just as the know a lot about the college. Their relationship with undergraduat students can be mutually rewarding, generating friendships th span generations. Above all, we urge that advisers be carefully s lected. Seminars to improve their advising skills should be sche uled, and colleges should show, by rewards and sanctions, th advising is a high priority on the campus.

Can the modern college find its own meaning for matriculatio Is it possible for today's students to feel both the excitement and t responsibility that come from joining a community of learning?

We conclude that a successful freshman-year program will co vince students that they are part of an intellectually vital, cari community. In such a setting counseling will occur in schedul sessions and also in hallways, over a cup of coffee, or on a stroll fro one building to another. The spirit of community will be sustain by a climate on the campus where personal relationships are prize where integrity is the hallmark of discourse, and where people spe and listen carefully to each other.

Above all, incoming students should understand the purpo and traditions of the institution and be reminded of both the opp tunities and obligations that guide a collegiate education.

faculty members are not likely to seek to affect an individual student's learning in the tutorial. What tutoring there is will probably grow from informal contacts and find its own patterns and time.

Advising

Supposedly, in some hallowed past, teachers and learners mingled intellectual and personal development so closely and so happily that there was no need for special counselors and advisers. The small, rural, residential college tried to approximate that condition. (In some New England prep schools even today, the headmaster personally bids each student good night every evening.) But accurate accounts of such colleges suggest that students and faculty maintained their distance even then and that the intellectual and personal lives of neither group ran smoothly side by side. Only in unusual times and under unusual circumstances is there great harmony. The confrontations of the sixties did not bring harmony, but it did bring forced intimacy on many campuses. At present, even that kind of association is looked on with nostalgia.

My point is that only in theory has there been much effective concern for knitting formal campus learning together with actual campus life. Living-learning arrangements that sprang up in the sixties have fallen short of becoming established campus patterns. Cluster colleges have survived, but only as a very small part of higher education.

What might an individual teacher do to go beyond keeping regular office hours and not brushing students off after class? I have tried a good many of the usual devices: sponsoring clubs, taking students to lunch, having them into my home, arranging picnics and parties, worrying about formal counseling procedures and trying to find better ones. I have drawn the conclusion that nothing works very long, that very little works without careful attention, and that students vary as widely as faculty in their need for enhancing institutional learning relationships and in their responses to ways of meeting that need.

Nevertheless, an education that purports to contribute anything to a person's life must surely deal with the relationships among the varieties of human beings that make up students and faculty and the varieties of activities they engage in, both as learners and persons. I am not talking, for the moment, about formal counseling; rather, about ways of advising and counseling indirectly, maybe no more formal than providing excuses and opportunities for easy talk.

One overall way of improving advising is to keep insisting on the idea of collegiality and to keep trying to provide structures through which students and faculty can have associations outside the classroom. Colleges and departments, in themselves, no longer provide these possibilities. Any such association will probably have to come from the students and faculty on their own, perhaps when a few like-minded individuals set out in a variety of ways to form informal collegial structures quite apart from those that now define campus teaching and learning.

Another way is to expand the opportunities for individual attention within the classroom. Class time used to help students see their own growth in relation to classwork is seldom wasted. From conscious efforts to identify students as something other than social security numbers can develop associations which have some chance of enduring beyond the twelve- or sixteen-week term.

The discontinuities of learning are a marked feature of mass education. Beyond the separation of classwork from out-of-class activities, of one class from another, and of one discipline from another are the larger separations of parents from the college and of alumni from the academic work they might have pursued. Again, I would suggest, probably in vain, more efforts to let parents see and enjoy some of the academic life they are paying for and to invite alumni back to share their after-colege experiences with students and faculty.

A final suggestion is to continue with something of the spirit and substance of the free university. Faculty members and students know many things outside their own disciplines. And though free learning has a hard time competing with credits and grades, it does have its attractions. Indeed, the kind of trust and friendship and expanded understanding that can grow out of learning with others something one really wants to learn is seldom approximated in a regular class. A weekend that a faculty member might spend with students rock-hunting or fly-casting or prowling some odd corners of a museum could be free learning in is best sense.

Within the present climate, my suggestions have about as much to do with the actual academic programs as with actual formal advising and counseling procedures. Yet, such attitudes and activities bear importantly on both. Formal advising is right now and everywhere in pretty much of a mess. The doctrine of *in loco parentis* having been swept aside, other ways of substitute advising have shifted or disappeared. The counseling functions taken over at one time by professionals in guidance and counseling appear to be coming back as faculty responsibilities. The venerable office of dean of students, which in small schools and in the past was intimately connected with the academic life of students, long ago lost that connection. Students developed their own agencies to cope with academic and nonacademic needs, which became separate provinces of the office of student affairs. In large universities, the sheer size of such functions as management of housing, health and psychological services, placement, and the student union has turned each into a separate operation. What I am beginning to see, probably as a consequence of these many changes, is a desire to unite once again academic concerns with something approximating the whole life of the student. This apparent drift accompanies a growing recognition that what students learn depends on many factors outside the teacher and that some total development of the student is still a legitimate aim of the college and a responsibility of the faculty as well.

Thus, a teacher may have to add a basic competence in counseling and advising to his professional skills. One gains such competence in much the same way as other skills: by learning through study or instruction or practice. Little skill is gained unless the teacher accepts the responsibility, gives attention to its details, and intelligently engages in doing it.

The patience to listen and the willingness to have routine information in the head or at hand are minimal qualities. Patience may develop from the recognition that listening gives a teacher legitimate respite from talking. The willingness to provide information is more a matter of will, of resisting cant as much as vowing a positive effort. The cant is that professors are incapable of keeping details straight and that petty details are beneath their dignity. It is odd that an institution would trust professors to master the details of vast and complex subject matters and not trust them to convey

* accurate information about requirements for a major. Admittedly there are degrees of competence in these respects as there are degrees of inclination. But the general tendency to relegate advising and counseling to only a handful of faculty is wrong, ultimately doing no favor to those teachers who at first escape drudgery but in the end perpetuate ignorance.

Advising and counseling are part of the necessary interchange between teacher and student. If a student makes the first step into a professor's office to find out what courses he or she still has to take, that step may lead to an exchange as important as that day's classroom lecture. Until a campus creates an ambience that expands these moments, both artificial and artful ways will have to serve. The teacher's responsibility is to tolerate the one—the obligatory advising, which may mean the mere getting of a signature—and to develop the other—ways of making embarrassing, trivial, mechanical, dumb queries lead to real questions. From that beginning, * a teacher can contribute much to learning outside the classroom.

There is a great deal to know in these matters, and faculty members who feel uneasy about counseling may be deferring to the greater wisdom of the professional clinician. The disturbed, the depressed, the paranoid, and the suicidal student are not screened out at admissions time. Teachers help create them. It may be better to be informed about where help is available than to try to handle a situation by oneself. I am thankful for living within a university community and knowing its resources in the times (still few in number) when I have been responsible for dealing with suicidal students or deranged faculty members. Teachers live among these responsibilities, and they should no more expect calamity every day than disregard the possibility that it might show up some day. So, although an open office door may be an invitation to trouble, the literal and figurative opening of office doors might be the best single step toward improving that part of out-of-classroom learning and of counseling and advising for which teachers have responsibility.

CONFLICTS OF INTERESTS POLICY

I. STATEMENT OF PURPOSE

A public servant occupies a position of trust and confidence, and the public expects its servants to be above reproach in fulfilling the duties and responsibilities of office. However, in a community as diverse and complex as that of a modern public university, the pursuit of individual interests may result in conflicts with University interests. It shall be the policy of the University that its Regents, officers, faculty and employees, hereinafter for the sake of brevity referred to as "individual," avoid these conflicts or even the appearance of such conflicts. The University of Oklahoma should serve as the model for ethical conduct in the State. If a University can not exemplify the highest principles of honesty and integrity, then its very reason for being is called into question.

This policy is not limited to outright dishonesty. It is clearly wrong and is a criminal offense to take state property, sell protected information and privileges for one's personal gain, or accept money, gifts or favors from suppliers. Most conflicts of interest are more subtle, and often only a matter of degree separates an acceptable course of action from an unacceptable one. What follows is intended to provide guidance to individuals, so that they can anticipate and avoid situations where personal interests cause a person to act in a way inconsistent with University interests.

The conflicting interests referred to throughout this policy may be direct or indirect. The interest might be that of the individual or that of another, such as a close relative or friend. It may even be that of a business in which the individual or other person has an interest, financial or otherwise, which is likely to or would tend to interfere with the individual's objective performance of public duties.

In determining whether a conflict exists, there is no substitute for common sense and good judgment. The cardinal question is whether one's judgment in official matters may be affected by circumstances of personal interest. In a particular situation, identification of a disqualifying interest must include all the facts, including, the individual's position, the government action, the impact of that action, the kind and amount of the individual's personal interest, and in some instances the kind and amount of the individual's other interest. In case of doubt, an individual should seek clarification from the President, or his or her designee, before acting. Consultation with Legal Counsel also may be desired.

II. STATEMENT OF RULES

A. Conflict of Interests. There are six general areas of concern, which are set forth below.

1. Seeking or Accepting Gifts. No individual shall seek or accept anything of value from others given for the purpose of influencing him or her in the discharge of official duties.

To come within this prohibition the interest must be one incurred by reason of the individual's public position. Normally this requirement would exclude gifts for purely social reasons; however, if a gift would have a tendency to reflect adversely upon one in the public eye, a conflict of interest will probably arise. Again one should seek to avoid the appearance of corruption, since the public expects a high ethical standard from its public servants.

This rule does not prohibit occasional acceptance of items of nominal value such as plaques, desk calendars, pens or pencils, examination copies and desk copies of textbooks, (generally less than $50.00), which are not intended to influence the judgment of the employee in the performance of his public duties. However, while favors or gifts may be small, they have the tendency to become reciprocal. If there is ever any doubt as to the offerer's intent, it is always advisable to decline the favor or gift. Benefits of significant value should be declined or returned with a letter explaining this policy; a copy of the letter should be retained. This rule does not prohibit gifts from within University community to individuals retiring or leaving the University or who have achieved some special distinction while at the University.

2. Improper Use of Office or Position. No individual shall knowingly use his official position with the University to obtain some special privilege or advantage for himself or herself or another except as specifically provided by law.

Improper use of position can take many forms. For example, one might use influence or coercive power with others to give a friend special consideration; or it might also induce the use of position to obtain preferential treatment with a private business having some connection with an individual.

One of the more frequent problems in this area concerns use of public property for personal purposes unrelated to the individual's public duties. Charging personal long distance telephone calls to the University, using a University vehicle for personal purposes, or using one's University office to operate a personal business are all examples of improper use.

3. Disclosure of Confidential Information. No individual shall offer to or in fact give, release or discuss confidential information obtained by the use of his or her official position to anyone not entitled to that information. Furthermore, no individual may use any confidential information obtained by the use of his or her official position for his or her own personal gain.

This prohibition is intended to protect not only information directly received by the individual but also information which one, by the use of some power associated with his or her official position or by virtue of that position, has obtained and offers to or in fact gives to another not entitled to that information. Some of the areas to which this policy pertain include student records, personnel records, proprietary research information, procurement, etc.

4. Commercial Transactions with the University and other State agencies. In general, no individual may sell, offer to sell, or cause to be sold, either as an individual or through any business enterprise in which he or she holds a substantial financial interest, any goods or services to the University or any other agency of the State or to any business licensed by or regulated by the State, unless the contract is preceded by public notice of the University's intent to procure such goods or services and they are procured by competitive bidding, with the individual being the lowest and best bidder.

Whether or not an individual has a "substantial financial interest" in a particular business organization is always a matter that must be determined on a case by case basis. One of the most important factors to be considered in interpreting "substantial financial interest" is whether the individual's judgment in official matters may be affected by circumstances of personal interest. Normally, individuals should avoid financial relationships with the University. For example, it would be improper for an individual to approve the awarding of a contract to a firm of which he is a part owner or which employs the spouse or other close relation of the one connected to the University.

One definition of "substantial financial interest" identifies it as an interest arising from a gift, salary or other compensation from any individual or business or an interest which could result in a substantial financial gain or loss arising from such interest in a business.

5. Outside Employment or Compensation. No individual may receive or solicit outside employment or compensation that would impair the independence of judgment of the individual in rendering service as a state employee unless specifically provided by law.

A person who accepts full time employment in the University owes his first duty and loyalty to the University. Any other employment or enterprise must be understood to be secondary to his University work. Notwithstanding this, a faculty or staff member is permitted, as set forth in the Faculty Handbook and Staff Handbook, to have some outside employment.

The University expects members of its faculty to pursue continual scholarly development and renewal and to share their professional capabilities for the common interest. The University recognizes that consulting activities may provide good opportunities toward these ends. Individuals are encouraged to devote, within the limits of the current policies of the University on outside employment, a reasonable amount of effort to personal professional activity beyond the professional responsibilities of employment by the University.

It is recognized that Regents are not full time employees of the University and that they have their separate careers. In the pursuit of their separate careers they should avoid placing themselves in situations and positions that might impair, or give the appearances of impairing, their independent judgment as Regents.

Of concern in this area, is the relationship of the University with foundations organized to benefit the University. Public servants must not permit their judgment to be clouded by concern over the effect of their actions on foundation goals and priorities. Individuals should not serve as officers for University-related foundations, nor should they receive compensation from such foundations for activities related to the improvement of education in the State. Any activities for which the employee or officer is able to receive extra compensation should be preceded by a contract between the foundation and the University, which calls for that compensation to be paid to the University, with the University then paying the employee.

6. Participation In Hearing Panels. No member of a University hearing or appeals panel or of another committee, council, or the Board of Regents when engaged in judicial proceedings shall participate in such an action when the panel member has a close professional or personal relationship with any of the principal parties in the matter or with their counsel/representatives. For instance, faculty and staff shall not participate as panel members when appellant or respondent is a member of their own department or unit or has been a close collaborator except in the case of appeals panels internal to some units where their rules specifically permit such participation.

B. Political Activities. All citizens of this country have guaranteed rights as individuals to participate in civic affairs. The key phrase is "as individuals." No individual may engage in political activities with the use of state funds, personnel or property. The provisions of the Regents' policies concerning political activities of faculty and employees shall continue in force and effect.

III. POLICY ADMINISTRATION

It shall be the policy of the University that if an individual fails to comply with any provision of this University policy, it may be grounds for appropriate disciplinary action. Complaints relating to violations should be reported to the appropriate academic dean or executive officer. Within sixty days of the implementation of this policy or within sixty days of employment, each individual shall sign a statement that he or she has read the policy and is familiar with its contents and every two years thereafter in the month of December a compliance statement shall be signed by each individual.

IV. CONCLUSION

No policy can hope to answer all questions that might arise. Whenever you are in doubt as to the propriety of any given situation, always err on the side of propriety. One might disclose the potential or perceived conflict, seek advice or guidance from the appropriate officer before entering into the activity, and make a record of the matter for future reference and use.

UNIVERSITY OF OKLAHOMA
NORMAN CAMPUS

POLICY AND PROCEDURES

for the

PROTECTION OF HUMAN SUBJECTS

in

RESEARCH ACTIVITIES

SECTION 1. APPLICABILITY

This document sets forth the policy and procedures for the protection of human subjects involved in research activities conducted at or sponsored by the University of Oklahoma-Norman Campus (OU-NC), including research activities (a) by faculty, staff, and students, (b) performed in OU-NC facilities, or (c) otherwise supported by University resources or facilities which are under the control of OU-NC officials. The policy and procedures herein are designed to conform to 45 Code of Federal Regulations Part 46 as implemented by United States Department of Health and Human Services (DHHS) "Final Regulations Amending Basic HHS Policy for the Protection of Human Subjects," January 26, 1981.

The procedures and safeguards herein shall apply to all sponsored research activities of the OU-NC. However, where a sponsor agency has more restrictive or elaborate requirements for the protection of human subjects, those requirements shall take precedence over this policy and shall be followed in the review and approval of those research projects. Note that additional DHHS requirements exist for the protection of special populations--such as fetuses, pregnant women, in vitro fertilization of human ova, prisoners, and persons institutionalized as mentally disabled--and those requirements must be followed when subjects are to be drawn from any of those populations. Special protections for children involved as subjects in research are set forth in 45 CFR 46 Subpart D which was added March 8, 1983. These protections must be met on all projects which involve children as research subjects.

The procedures and safeguards herein shall also apply to all unsponsored research activities of the OU-NC, except that the Institutional Review Board-Norman Campus (IRB-NC) shall have the authority to modify these procedures and safeguards when it deems necessary, provided that such modifications preserve adequate protection for the rights and welfare of the subjects of unsponsored research. Such modifications for unsponsored research may include expansion of the coverage or modifications of the criteria or documentation for obtaining informed consent.

The OU-NC will comply with DHHS requirements regarding cooperative research projects. When sponsored research is conducted at or in cooperation with another entity, all provisions of this policy shall remain in effect for that

SEXUAL HARASSMENT

Reprinted below are two statements regarding sexual harassment. The first is from the Equal Employment Opportunity Commission of the U.S. Government, and is from their final set of guidelines making sexual harassment an act of discrimination under Title VII of the Civil Rights Act. The second is from a 1981 memorandum from Dr. Melvin A. Eggers, Chancellor of Syracuse University, to the University community, and is reprinted here with his permission.

Sexual harassment is defined by the EEOC as:

> "Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature . . . when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, (2) submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting such individual, or (3) such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive work environment."

Chancellor Eggers writes:

> "The academic community depends on the integrity of its members to maintain an environment in which all may function free of intimidation. Any faculty and staff members who would use the power and authority of their offices to achieve personal ends would corrupt the university. Sexual harassment is recognized as a means of limiting educational and professional opportunities, particularly of women."

(August, 1988)

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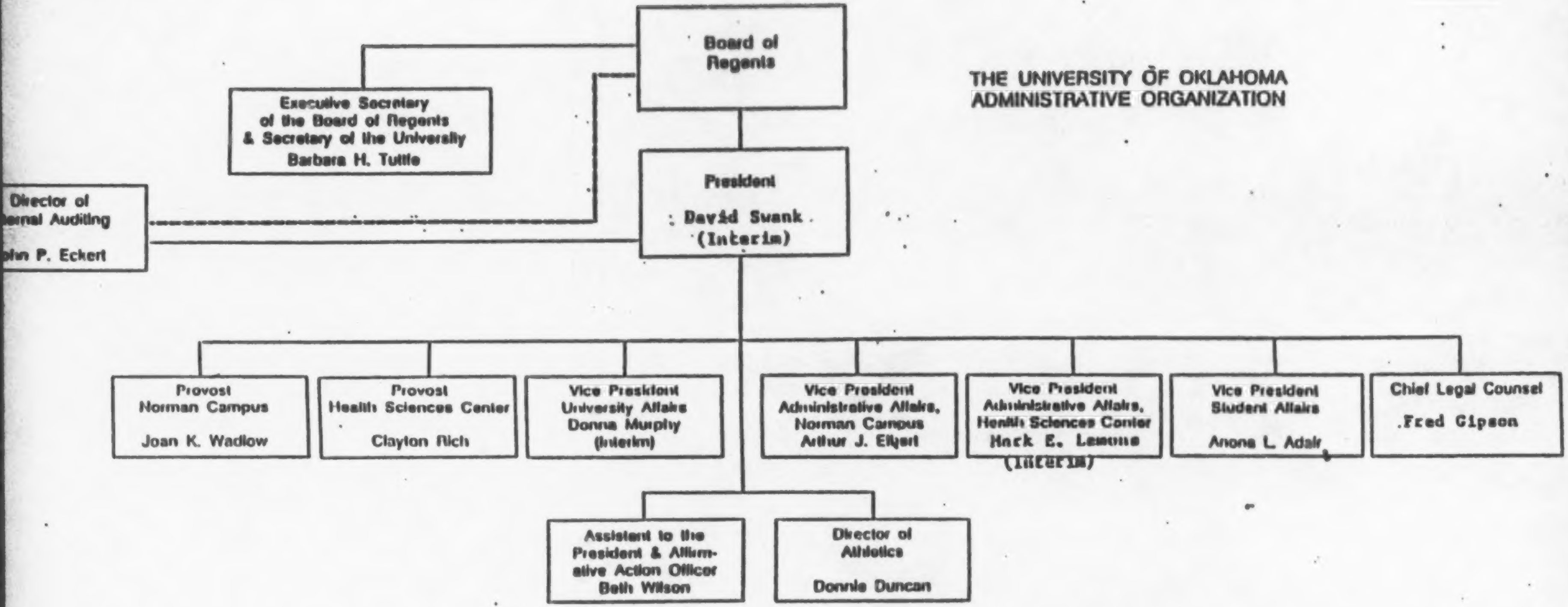
ADMINISTRATIVE ORGANIZATION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Executive Secretary of the Board of Regents & Secretary of the University
Barbara H. Tuttle
Director of
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ohn P. Eckert
President
David Swank
(Interim)
Provost
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Fred Gipson
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Beth Wilson
Director of Athletics
Donnie Duncan

(August, 1988)

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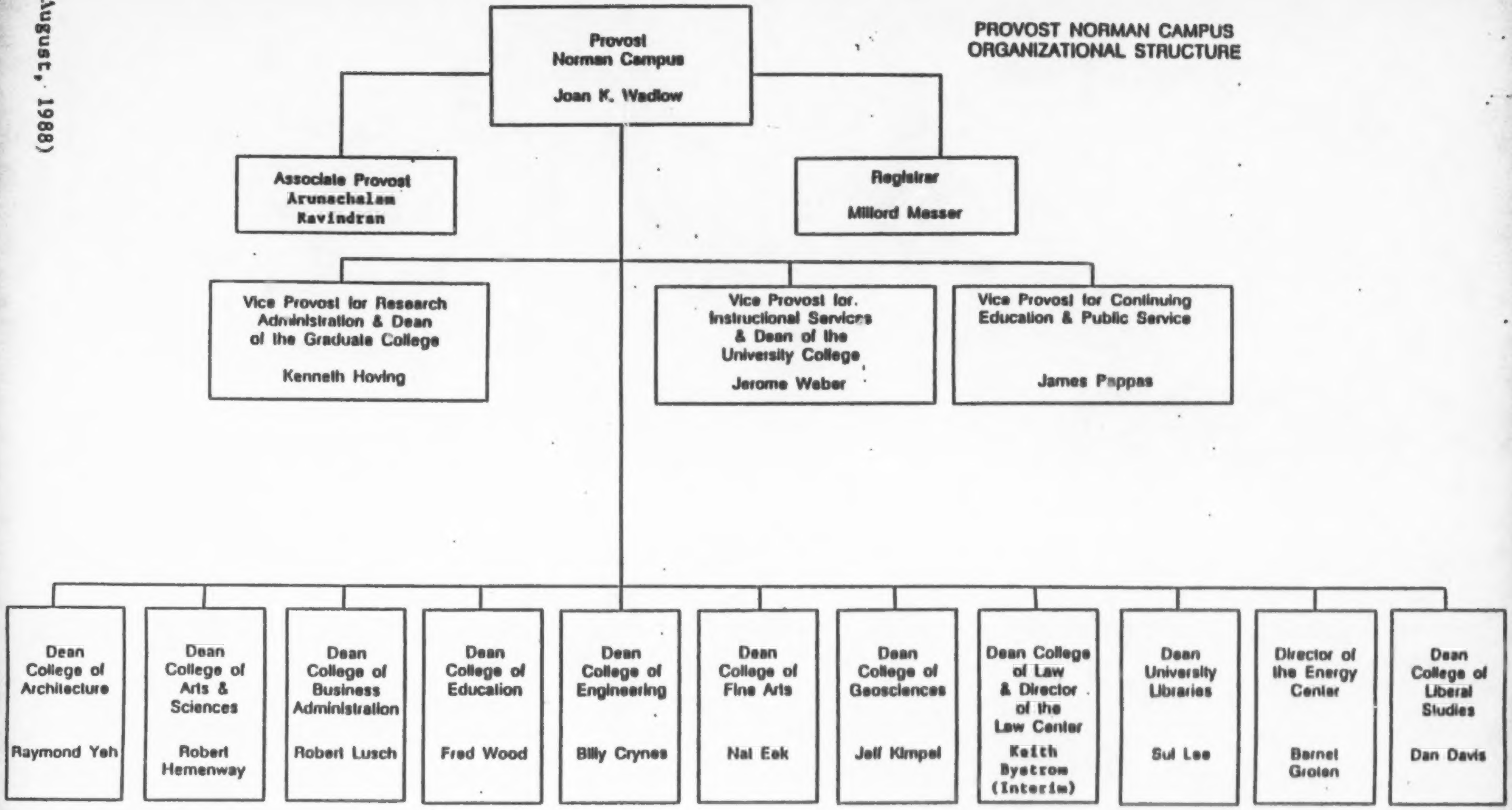
Provost
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Robert Lusch
Dean College of Education
Fred Wood
Dean College of Engineering
Billy Crynes
Dean College of Fine Arts
Nat Eek
Dean College of Geosciences
Jeff Kimpel
Dean College of Law & Director of the Law Center
Keith Bystrom (Interim)
Dean University Libraries
Sul Lee
Director of the Energy Center
Barnet Groten
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Dan Davis

Appendix 16

END

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Date Filmed

March 21,1991